

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Report**

**“Tar”, “Nicotine”, and Carbon Monoxide Values**

copies for  
Langston  
Whitman  
Reznick

**May 5, 1989**

**PM3001059824**

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Source: <https://www.industrydocuments.ucsf.edu/docs/nkkk0001>

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results**

Brand	"Tar" mg/cig	"Nicotine" mg/cig	CO mg/cig
*Alpine KFMSP .....	17.1±0.2	1.14±0.02	16.5±0.2
American Lights KFSP.....	11.9±0.2	0.91±0.02	12.9±0.3
American Lights 100's 100FSP .....	13.3±0.2	1.08±0.01	13.9±0.2
Belair KFMSP .....	10.7±0.2	0.84±0.01	9.8±0.2
Belair 100's 100FMSP.....	8.8±0.2	0.67±0.02	9.1±0.2
Benson & Hedges KFHP .....	15.4±0.2	1.26±0.02	12.6±0.3
*Benson & Hedges 100's 100FHP .....	17.3±0.2	1.20±0.03	17.0±0.4
*Benson & Hedges 100's 100FMHP .....	17.4±0.2	1.22±0.01	17.2±0.3
*Benson & Hedges 100's 100FSP .....	17.3±0.2	1.22±0.02	16.4±0.4
*Benson & Hedges 100's 100FMSP .....	17.1±0.2	1.20±0.02	16.4±0.3
Benson & Hedges Deluxe Ultra Lights 100's 100FHP .....	5.0±0.2	0.44±0.02	6.2±0.3
Benson & Hedges Deluxe Ultra Lights 100's 100FMHP .....	5.2±0.1	0.47±0.01	6.2±0.2
Benson & Hedges Lights 100's 100FSP .....	10.7±0.2	0.83±0.02	13.0±0.3
Benson & Hedges Lights 100's 100FMSP .....	10.7±0.2	0.81±0.02	12.0±0.2
Benson & Hedges Multifilter KFSP .....	11.2±0.3	0.85±0.02	10.8±0.2
Bright 100s 100FMSP .....	6.0±0.1	0.44±0.01	10.3±0.3
Cambridge Full Flavor KFSP .....	17.1±0.3	1.09±0.01	16.1±0.3
Cambridge Full Flavor 100's 100FSP .....	17.2±0.3	1.17±0.02	16.0±0.3
Cambridge Lights KFSP .....	12.3±0.2	0.85±0.01	12.7±0.3
Cambridge Lights KFMSP .....	11.9±0.2	0.84±0.02	12.1±0.3
Cambridge Lights 100's 100FSP .....	12.0±0.2	0.87±0.02	14.5±0.4
Cambridge Lights 100's 100FMSP .....	11.9±0.2	0.86±0.01	14.6±0.4
Cambridge Ultra Low Tar 100's 100FSP .....	4.7±0.2	0.41±0.01	6.6±0.3
Camel RNFSP .....	22.0±0.3	1.39±0.02	14.2±0.4
Camel Filters KFHP .....	16.8±0.2	1.06±0.02	16.6±0.3
Camel Filters KFSP .....	15.6±0.3	1.01±0.02	15.4±0.2
Camel Filters 100's 100FSP .....	17.5±0.2	1.06±0.01	18.7±0.3
Camel Lights KFHP .....	9.9±0.2	0.64±0.01	11.8±0.3
Camel Lights KFSP .....	8.8±0.2	0.65±0.01	11.3±0.3
Camel Lights 100's 100FSP .....	11.4±0.2	0.81±0.01	15.0±0.3
Capri 100FHP .....	9.2±0.2	0.78±0.02	6.4±0.2
Capri 100FMHP .....	8.9±0.2	0.73±0.02	6.0±0.2
Carlton KFHP .....	<0.5	<0.05	<0.5
Carlton KFSP .....	1.3±0.1	0.15±0.01	2.4±0.1
Carlton 100's 100FHP .....	0.7±0.1	0.10±0.01	1.1±0.1
Carlton 100's 100FMHP .....	0.6±0.1	0.10±0.01	1.0±0.1
Carlton 100's 100FSP .....	3.4±0.1	0.35±0.01	4.6±0.2
Carlton 100's 100FMSP .....	4.5±0.1	0.42±0.01	6.4±0.2
Carlton 120's 120FSP .....	6.5±0.2	0.62±0.02	5.6±0.2
Carlton 120's 120FMSP .....	6.2±0.2	0.62±0.03	5.5±0.2
Century 25's (25) KFSP .....	15.3±0.3	0.99±0.02	17.8±0.3
Century 25's 100's 100FSP .....	17.5±0.3	1.13±0.02	20.9±0.5
Century 25's Lights (25) KFSP .....	9.7±0.2	0.70±0.02	11.8±0.3
Century 25's Lights 100's 100FSP .....	11.9±0.3	0.89±0.02	13.4±0.3
Century 25's Menthol Lights 100's 100FMSP .....	11.5±0.2	0.84±0.01	13.2±0.3

\*Retested brand

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**Tobacco Institute Testing Laboratory**  
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**Test Results**

<b>Brand</b>	<b>“Tar” mg/cig</b>	<b>“Nicotine” mg/cig</b>	<b>CO mg/cig</b>
Chesterfield RNFSP .....	20.0±0.5	1.30±0.03	13.3±0.4
Chesterfield KNFSP .....	24.2±0.5	1.65±0.04	15.3±0.5
Doral Full Flavor KFSP .....	17.4±0.2	0.92±0.01	19.6±0.4
Doral Full Flavor 100's 100FSP.....	14.8±0.2	0.84±0.01	17.2±0.3
Doral Lights KFSP .....	12.1±0.3	0.67±0.02	14.5±0.4
Doral Menthol Lights KFMSP.....	11.7±0.2	0.64±0.01	14.0±0.2
Doral Lights 100's 100FSP.....	11.3±0.3	0.70±0.02	12.9±0.3
Doral Menthol Lights 100's 100FMSP .....	12.1±0.3	0.73±0.01	13.7±0.3
Doral Ultra Lights 100's 100FSP .....	6.7±0.3	0.48±0.02	11.7±0.5
English Ovals KNFHP .....	23.8±0.6	1.87±0.04	15.6±0.5
Eve Slim Lights 100's 100FHP .....	12.8±0.2	1.03±0.02	11.0±0.2
Eve Slim Lights 100's 100FMHP .....	12.6±0.3	1.00±0.02	10.8±0.3
Eve Lights 120's 120FHP .....	13.0±0.4	1.12±0.03	11.6±0.5
Eve Lights 120's 120FMHP .....	13.5±0.2	1.17±0.02	12.0±0.3
Falcon Lights KFSP .....	11.2±0.2	0.77±0.02	11.2±0.3
Falcon Lights KFMSP .....	10.2±0.3	0.78±0.02	11.9±0.4
Falcon Lights 100's 100FSP .....	12.1±0.2	0.85±0.02	14.8±0.4
Falcon Lights 100's 100FMSP .....	8.9±0.2	0.73±0.02	11.0±0.3
Harley Davidson KFSP .....	14.1±0.3	0.98±0.02	16.3±0.4
Herbert Tareyton KNFSP.....	25.1±0.9	1.58±0.03	17.8±0.4
Kent Golden Lights KFHP .....	8.8±0.3	0.78±0.02	9.7±0.4
Kent Golden Lights KFSP .....	8.5±0.2	0.74±0.02	9.6±0.3
Kent Golden Lights KFMSP .....	8.3±0.3	0.75±0.02	9.1±0.4
Kent Golden Lights 100s 100FHP .....	10.2±0.2	0.91±0.02	11.2±0.4
Kent Golden Lights 100s 100FSP.....	9.6±0.3	0.86±0.02	10.5±0.4
Kent Golden Lights 100s 100FMSP.....	9.3±0.2	0.85±0.02	10.0±0.3
Kent KFHP .....	11.3±0.2	0.86±0.02	12.9±0.3
Kent KFSP .....	12.0±0.2	0.88±0.02	13.9±0.3
Kent 100s 100FSP.....	13.6±0.3	1.02±0.02	14.7±0.4
Kent 100s 100FMSP.....	14.0±0.2	1.04±0.01	14.4±0.3
Kent III KFSP.....	3.4±0.2	0.35±0.02	4.3±0.2
Kent III 100s 100FHP .....	5.0±0.2	0.50±0.03	6.8±0.3
Kent III 100s 100FSP .....	4.7±0.2	0.45±0.01	6.6±0.3
Kool RNFMSP .....	21.5±0.8	1.36±0.03	14.5±0.2
Kool KFMHP .....	16.2±0.4	1.12±0.03	16.4±0.4
Kool KFMSP .....	16.8±0.3	1.14±0.02	16.8±0.3
Kool Super Longs 100's 100FMSP.....	16.7±0.3	1.25±0.02	17.0±0.3
Kool Lights KFMSP .....	8.2±0.2	0.69±0.02	9.0±0.2
Kool Lights 100's 100FMSP .....	8.5±0.2	0.73±0.01	10.0±0.3
Kool Milds KFMHP .....	11.6±0.3	0.88±0.02	11.3±0.3
Kool Milds KFMSP .....	12.3±0.3	0.93±0.02	13.1±0.3
Kool Milds 100's 100FMSP .....	12.0±0.3	0.95±0.02	12.6±0.4
Kool Ultra KFMSP .....	2.2±0.2	0.21±0.02	2.7±0.2
Kool Ultra 100's 100FMSP .....	5.0±0.3	0.45±0.02	5.2±0.3
L & M KFSP.....	13.7±0.2	1.08±0.02	12.9±0.3
L & M Super 100 100FSP .....	13.9±0.2	1.12±0.02	14.2±0.3
L & M Long Lights 100FSP .....	7.8±0.2	0.80±0.02	6.3±0.2

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Brand	"Tar" mg/cig	"Nicotine" mg/cig	CO mg/cig
L & M 30's Lights 100's 100FSP .....	12.6±0.3	1.06±0.02	10.7±0.3
Lark KFSP .....	14.3±0.3	1.11±0.03	13.3±0.3
Lark 100FSP .....	14.7±0.2	1.22±0.02	14.0±0.2
Lark Lights KFSP .....	13.4±0.3	1.03±0.02	13.3±0.3
Lark Light 100's 100FSP .....	13.9±0.3	1.15±0.03	14.5±0.5
Lucky Strike RNFSP .....	24.4±0.5	1.52±0.02	16.5±0.3
Lucky Strike KFHP .....	12.1±0.2	0.92±0.02	12.8±0.4
Lucky Strike KFSP .....	11.8±0.3	0.89±0.02	12.6±0.3
Lucky Strike Filters 100's 100FSP .....	11.9±0.2	0.96±0.02	12.7±0.2
Lucky Strike Menthol 100's 100FMSP .....	11.8±0.1	0.96±0.02	12.3±0.2
Lucky Strike Lights KFSP .....	8.4±0.3	0.68±0.02	10.2±0.3
Lucky Strike Lights 100's 100FSP .....	8.9±0.2	0.74±0.01	10.0±0.3
Magna KFHP .....	14.1±0.3	0.90±0.01	16.3±0.4
Magna KFSP .....	13.9±0.2	0.91±0.02	14.9±0.2
Magna Lites KFSP .....	9.1±0.2	0.64±0.01	13.7±0.2
Malibu Filters KFSP .....	16.4±0.3	1.18±0.03	13.6±0.3
Malibu Menthol KFMSP .....	17.2±0.2	1.24±0.02	14.8±0.2
Carlton KFMSP .....	0.6±0.1	0.09±0.01	1.4±0.1
Malibu 100's 100FSP .....	13.9±0.3	1.10±0.02	13.4±0.3
Malibu Menthol 100's 100FMSP .....	11.6±0.2	0.94±0.02	12.5±0.3
Malibu Lights KFSP .....	10.2±0.2	0.79±0.01	10.8±0.3
Malibu Lights 100's 100FSP .....	9.1±0.2	0.75±0.02	10.6±0.4
Marlboro KFHP .....	17.0±0.2	1.14±0.02	15.2±0.3
Marlboro KFSP .....	17.4±0.2	1.17±0.02	16.9±0.4
*Marlboro KFMSP .....	17.1±0.3	1.18±0.01	15.3±0.2
Marlboro 100's 100FHP .....	17.0±0.4	1.22±0.03	16.9±0.6
Marlboro 100's 100FSP .....	17.1±0.3	1.22±0.02	16.5±0.4
Marlboro 25's KFSP .....	17.2±0.3	1.13±0.02	15.9±0.3
Marlboro Lights KFHP .....	11.0±0.2	0.82±0.02	12.4±0.3
Marlboro Lights KFMHP .....	10.2±0.2	0.78±0.02	11.2±0.3
Marlboro Lights KFSP .....	11.2±0.2	0.83±0.02	12.2±0.3
Marlboro Lights KFMSP .....	9.9±0.2	0.77±0.01	10.4±0.3
Marlboro Lights 100's 100FHP .....	10.8±0.2	0.85±0.02	12.3±0.3
Marlboro Lights 100's 100FHMP .....	10.2±0.2	0.81±0.02	11.2±0.4
Marlboro Lights 100's 100FSP .....	11.0±0.2	0.85±0.02	13.0±0.4
Marlboro Lights 100's 100FMSP .....	10.9±0.1	0.86±0.01	12.0±0.3
Marlboro Lights 25's KFSP .....	11.2±0.2	0.80±0.02	12.4±0.3
Marlboro 100's Red 100FHP .....	16.4±0.3	1.19±0.02	16.3±0.4
Marlboro 100's Red 100FSP .....	16.5±0.2	1.19±0.02	17.0±0.2
Max 120s 120FSP .....	17.1±0.4	1.34±0.03	17.7±0.4
Max 120s 120FMSP .....	17.2±0.4	1.38±0.03	17.0±0.5
Merit KFHP .....	7.8±0.2	0.60±0.01	9.8±0.2
Merit KFSP .....	7.6±0.2	0.59±0.01	9.8±0.3
Merit KFMSP .....	7.7±0.2	0.58±0.01	10.0±0.3
Merit 100's 100FSP .....	10.0±0.2	0.80±0.02	11.8±0.3

\*Retested brand

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**Tobacco Institute Testing Laboratory**  
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**Test Results**

<b>Brand</b>	<b>“Tar” mg/cig</b>	<b>“Nicotine” mg/cig</b>	<b>CO mg/cig</b>
Merit 100's 100FMSP .....	10.1±0.2	0.78±0.02	12.0±0.3
Merit Ultra Lights KFSP .....	4.4±0.2	0.43±0.01	5.5±0.2
Merit Ultra Lights KFMSP .....	4.5±0.1	0.42±0.01	5.9±0.2
Merit Ultra Lights 100's 100FSP .....	5.3±0.1	0.50±0.01	7.4±0.2
Merit Ultra Lights 100's 100FMSP .....	6.0±0.2	0.53±0.02	8.2±0.3
More 120s 120FSP .....	16.5±0.4	1.19±0.02	21.5±0.4
More 120s 120FMSP .....	16.6±0.3	1.28±0.03	22.0±0.5
More Lights 100s 100FHP .....	10.0±0.2	0.78±0.02	10.7±0.3
More Lights 100s 100FMHP .....	9.0±0.3	0.69±0.03	10.2±0.3
More Lights 120s 120FSP .....	12.9±0.2	0.98±0.01	20.2±0.5
More Lights 120s 120FMSP .....	12.2±0.4	0.99±0.03	19.6±0.5
Newport KFMHP .....	15.7±0.2	1.17±0.02	16.5±0.3
Newport KFMSP .....	17.2±0.4	1.26±0.02	18.3±0.5
Newport 100's 100FMHP .....	19.2±0.2	1.46±0.02	19.4±0.4
Newport 100's 100FMSP .....	19.3±0.3	1.47±0.03	19.4±0.4
Newport 25's KFMSP .....	17.2±0.2	1.28±0.02	18.2±0.4
Newport 25's 100FMSP .....	19.5±0.3	1.48±0.02	19.8±0.3
Newport Lights KFMHP .....	8.6±0.2	0.73±0.02	9.5±0.3
Newport Lights KFMSP .....	8.3±0.3	0.75±0.02	9.1±0.3
Newport Lights 100's 100FMHP .....	9.2±0.3	0.84±0.02	9.9±0.3
Newport Lights 100's 100FMSP .....	9.0±0.3	0.83±0.02	9.5±0.4
Newport Stripes 100FHP .....	12.3±0.3	0.94±0.02	16.6±0.4
Newport Stripes 100FMHP .....	12.2±0.2	0.91±0.02	16.5±0.2
Newport Stripes Slim Lights 100FMHP .....	9.3±0.2	0.76±0.02	11.4±0.2
Now KFHP .....	<0.5	<0.05	<0.5
Now KFSP .....	1.0±0.1	0.14±0.01	2.3±0.1
Now KFMSP .....	1.1±0.1	0.13±0.01	2.3±0.1
Now 100s 100FHP .....	<0.5	<0.05	<0.5
Now 100s 100FSP .....	1.9±0.1	0.21±0.01	3.1±0.2
Now 100s 100FMSP .....	2.5±0.1	0.26±0.01	4.3±0.2
Old Gold Straights KNFSP .....	26.9±0.6	1.89±0.05	18.7±0.5
Old Gold Filters KFSP .....	16.8±0.2	1.24±0.02	18.1±0.3
Old Gold Filter 100's 100FSP .....	19.7±0.3	1.50±0.03	19.6±0.4
Old Gold Lights KFSP .....	9.3±0.2	0.81±0.02	10.9±0.3
Old Gold Lights 100s 100FSP .....	12.3±0.2	0.91±0.02	17.0±0.3
Pall Mall KNFSP .....	24.9±0.3	1.64±0.02	16.6±0.4
Pall Mall 25's KNFSP .....	24.7±0.3	1.64±0.03	16.5±0.3
Pall Mall 100's 100FSP .....	17.0±0.3	1.28±0.02	17.1±0.3
Pall Mall Lights 100's 100FSP .....	10.3±0.2	0.84±0.02	12.0±0.3
Pall Mall Light 100's Low Tar 100FMSP .....	13.3±0.2	1.08±0.02	13.1±0.3
Pall Mall Red Filters KFSP .....	13.6±0.3	1.02±0.02	12.6±0.3
Pall Mall Red Filters 100's 100FSP .....	13.8±0.3	1.07±0.02	14.0±0.2
Pall Mall Red Lights KFSP .....	10.3±0.3	0.81±0.02	10.7±0.3
Pall Mall Red Lights 100's 100FSP .....	11.1±0.2	0.88±0.02	12.2±0.4
Parliament Lights KFHP .....	9.5±0.2	0.72±0.02	10.3±0.4
Parliament Lights KFSP .....	9.1±0.2	0.71±0.02	10.4±0.2
Parliament Lights 100's 100FSP .....	12.0±0.2	0.95±0.02	12.7±0.2

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results**

<b>Brand</b>	<b>"Tar" mg/cig</b>	<b>"Nicotine" mg/cig</b>	<b>CO mg/cig</b>
Philip Morris Commander KNFSP .....	26.3±0.5	1.61±0.03	16.2±0.5
Philip Morris International 100FHP .....	16.8±0.4	1.15±0.02	15.6±0.4
Philip Morris International 100FMHP .....	16.9±0.2	1.08±0.02	16.2±0.4
Players RNFHP .....	25.2±0.4	1.74±0.03	15.9±0.4
Players KFHP .....	11.7±0.2	0.83±0.02	12.2±0.2
Players KFMHP .....	11.9±0.2	0.82±0.01	12.3±0.2
Players 100's 100FHP .....	13.9±0.2	0.98±0.02	12.9±0.3
Players 100's 100FMHP .....	14.0±0.2	0.98±0.02	12.7±0.3
Players Lights 25's KFSP .....	10.0±0.2	0.72±0.02	11.1±0.2
Players Lights 25's KFMSP .....	10.0±0.2	0.71±0.01	11.1±0.4
Players 25's Lights 100's 100FSP .....	11.9±0.3	0.86±0.02	14.1±0.4
Players 25's Lights 100's 100FMSP .....	11.4±0.2	0.81±0.01	13.7±0.3
Raleigh KNFSP .....	23.8±0.5	1.40±0.03	16.6±0.4
Raleigh KFSP .....	15.5±0.4	0.97±0.03	14.7±0.3
Raleigh 100's 100FSP .....	15.5±0.3	0.99±0.02	16.0±0.3
Raleigh Lights KFSP .....	11.4±0.2	0.87±0.02	13.1±0.3
Raleigh Lights 100's 100FSP .....	12.2±0.3	0.94±0.02	14.3±0.3
Richland 20's KFSP .....	16.3±0.3	1.13±0.02	16.0±0.3
Richland 20's KFMSP .....	16.4±0.4	1.05±0.02	16.1±0.3
Richland 20's 100's 100FSP .....	16.6±0.3	1.23±0.02	17.3±0.4
Richland 20's Menthol 100's 100FMSP .....	16.7±0.3	1.15±0.02	17.1±0.3
Richland 20's Lights KFSP .....	11.7±0.3	0.90±0.02	13.5±0.3
Richland 20's Lights 100's 100FSP .....	12.1±0.2	0.90±0.02	14.2±0.4
Richland (25) KFSP .....	16.6±0.2	1.18±0.02	15.8±0.2
Richland (25) KFMSP .....	16.2±0.3	1.09±0.02	15.6±0.3
Richland 100's (25) 100FSP .....	17.0±0.3	1.28±0.02	17.3±0.4
Richland 100's (25) 100FMSP .....	16.0±0.3	1.16±0.02	16.3±0.4
Richland Lights (25) KFSP .....	11.5±0.2	0.89±0.02	12.7±0.3
Richland Lights (25) 100's 100FSP .....	12.4±0.2	0.94±0.02	14.0±0.2
Ritz 100 100FHP .....	10.4±0.3	0.78±0.02	11.5±0.4
Ritz 100 100FMHP .....	11.1±0.3	0.81±0.02	11.5±0.3
Salem KFMSP .....	15.9±0.3	1.04±0.02	16.7±0.3
Salem 100's 100FMSP .....	16.8±0.3	1.19±0.02	16.1±0.3
Salem Lights KFMSP .....	9.8±0.2	0.72±0.02	12.6±0.2
Salem Lights 100's 100FMHP .....	11.3±0.2	0.86±0.02	11.6±0.2
Salem Lights 100's 100FMSP .....	9.3±0.3	0.74±0.02	11.1±0.4
Salem Slim Lights 100's 100FMHP .....	9.5±0.2	0.77±0.02	10.2±0.3
Salem Ultra Lights KFMSP .....	4.9±0.1	0.43±0.01	7.7±0.2
Salem Ultra Lights 100's 100FMSP .....	5.1±0.1	0.45±0.01	8.0±0.2
Saratoga 120's 120FHP .....	14.7±0.2	1.07±0.02	14.8±0.3
Saratoga 120's 120FMHP .....	14.7±0.3	1.07±0.02	14.8±0.4
Satin 100FSP .....	11.4±0.3	0.97±0.02	13.1±0.4
Satin 100FMSP .....	11.4±0.3	0.97±0.02	13.3±0.4
Silva Thins Filters 100FHP .....	12.2±0.2	0.97±0.02	12.5±0.3
Silva Thins Menthol 100FMHP .....	11.1±0.2	0.90±0.01	11.7±0.3
Silva Thins 100FSP .....	11.7±0.2	0.98±0.02	10.0±0.2
Silva Thins Menthol 100FMSP .....	12.3±0.3	1.05±0.02	10.5±0.3

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results**

Brand	"Tar" mg/cig	"Nicotine" mg/cig	CO mg/cig
Spring 100's 100FMSP	19.3±0.2	1.49±0.03	19.0±0.2
Tall 120s 120FSP	20.4±0.3	1.64±0.03	20.2±0.4
Tall 120s 120FMSP	18.0±0.3	1.57±0.03	16.5±0.5
Tareyton KFSP	14.3±0.3	0.98±0.02	15.9±0.3
Tareyton 100's 100FSP	14.1±0.2	1.02±0.02	16.8±0.4
Tareyton Lights KFSP	5.2±0.2	0.44±0.01	6.0±0.2
Tareyton Long Lights 100FSP	8.1±0.2	0.68±0.01	8.8±0.3
Triumph KFSP	3.1±0.1	0.32±0.02	3.8±0.2
Triumph KFMSP	3.5±0.2	0.34±0.02	4.3±0.2
Triumph 100s 100FSP	5.3±0.3	0.50±0.02	7.4±0.4
Triumph 100s 100FMSP	5.4±0.2	0.52±0.01	7.5±0.2
True KFSP	5.1±0.2	0.48±0.02	6.4±0.3
True KFMSP	4.9±0.3	0.46±0.02	6.1±0.4
True 100's 100FSP	6.7±0.3	0.61±0.02	7.4±0.4
True 100's 100FMSP	6.7±0.4	0.61±0.03	7.3±0.5
Vantage KFSP	10.5±0.2	0.75±0.02	13.5±0.3
Vantage KFMSP	10.0±0.2	0.69±0.01	12.5±0.3
Vantage 100s 100FSP	8.8±0.2	0.63±0.02	12.5±0.3
Vantage Menthol 100s 100FMSP	8.3±0.2	0.61±0.01	12.7±0.3
Vantage Ultra Lights KFSP	5.5±0.1	0.47±0.01	8.0±0.2
Vantage Ultra Lights 100s 100FSP	5.8±0.1	0.50±0.01	9.5±0.2
Viceroy KFSP	15.3±0.3	0.97±0.02	14.5±0.3
Viceroy Super Long 100's 100FSP	15.9±0.3	1.14±0.02	15.1±0.3
Viceroy Lights KFSP	11.3±0.3	0.88±0.02	13.1±0.3
Viceroy Lights 100's 100FSP	11.9±0.2	0.92±0.02	14.1±0.3
Virginia Slims 100FSP	15.3±0.2	1.07±0.02	13.8±0.3
Virginia Slims 100FMSP	15.1±0.3	1.06±0.03	13.9±0.3
Virginia Slims Lights 100FHP	8.8±0.2	0.70±0.02	9.3±0.3
Virginia Slims Lights 100FMHP	8.5±0.2	0.69±0.02	9.2±0.2
*Virginia Slims Lights 120's 120FHP	14.8±0.2	1.09±0.02	15.2±0.3
*Virginia Slims Lights 120's 120FMHP	14.9±0.2	1.08±0.01	14.9±0.2
Winston KFHP	16.8±0.3	1.06±0.02	16.9±0.3
Winston KFSP	17.1±0.3	1.13±0.02	16.3±0.2
Winston 100's 100FSP	16.9±0.2	1.06±0.02	18.6±0.3
Winston Lights KFHP	9.7±0.2	0.63±0.01	11.7±0.3
Winston Lights KFSP	10.7±0.2	0.75±0.01	13.2±0.3
Winston Lights 100's 100FHP	9.9±0.2	0.72±0.02	11.8±0.3
Winston Lights 100's 100FSP	11.4±0.2	0.81±0.01	13.4±0.3
Winston Ultra Lights KFSP	5.5±0.2	0.46±0.01	8.5±0.2
Winston Ultra Lights 100's 100FSP	5.3±0.2	0.47±0.02	9.0±0.3
Craven "A" KFHP	15.8±0.4	1.15±0.02	16.3±0.4
Craven "A" Filter Standard Size RFHP	18.6±0.4	1.51±0.03	13.6±0.3
Dunhill International 100FHP	15.2±0.3	1.39±0.03	17.6±0.3
Dunhill Menthol 100FMHP	14.2±0.3	1.19±0.02	17.0±0.4
Dunhill Menthol Mild 100FMHP	10.4±0.2	0.96±0.02	12.5±0.2

\*Retested brand

**Tobacco Institute Testing Laboratory  
Market Sample 31  
Test Results**

<b>Brand</b>	<b>"Tar" mg/cig</b>	<b>"Nicotine" mg/cig</b>	<b>CO mg/cig</b>
Dunhill International Superior Mild 100FHP.....	8.4±0.2	0.73±0.01	10.5±0.2
Rothmans KFHP.....	19.4±0.4	1.34±0.02	22.5±0.7
Rothmans Special Mild KFHP.....	13.6±0.2	1.03±0.02	15.5±0.4
St. Moritz Filter 100s 100FSP.....	14.9±0.2	1.08±0.02	15.5±0.2
St. Moritz Menthol 100FMSP .....	14.9±0.3	0.96±0.01	17.1±0.4

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results - Rounded Values**

Brand	"Tar" mg/cig	"Nicotine" mg/cig	CO mg/cig
*Alpine KFMSP .....	17	1.1	16
American Lights KFSP.....	12	0.9	13
American Lights 100's 100FSP.....	13	1.1	14
Belair KFMSP .....	11	0.8	10
Belair 100's 100FMSP.....	9	0.7	9
Benson & Hedges KFHP.....	15	1.3	13
*Benson & Hedges 100's 100FHP .....	17	1.2	17
*Benson & Hedges 100's 100FMHP .....	17	1.2	17
*Benson & Hedges 100's 100FSP .....	17	1.2	16
*Benson & Hedges 100's 100FMSP .....	17	1.2	16
Benson & Hedges Deluxe Ultra Lights 100's 100FHP .....	5	0.4	6
Benson & Hedges Deluxe Ultra Lights 100's 100FMHP .....	5	0.5	6
Benson & Hedges Lights 100's 100FSP .....	11	0.8	13
Benson & Hedges Lights 100's 100FMSP .....	11	0.8	12
Benson & Hedges Multifilter KFSP .....	11	0.8	11
Bright 100s 100FMSP .....	6	0.4	10
Cambridge Full Flavor KFSP .....	17	1.1	16
Cambridge Full Flavor 100's 100FSP .....	17	1.2	16
Cambridge Lights KFSP .....	12	0.8	13
Cambridge Lights KFMSP.....	12	0.8	12
Cambridge Lights 100's 100FSP .....	12	0.9	15
Cambridge Lights 100's 100FMSP .....	12	0.9	15
Cambridge Ultra Low Tar 100's 100FSP .....	5	0.4	7
Camel RNFSP .....	22	1.4	14
Camel Filters KFHP .....	17	1.1	17
Camel Filters KFSP .....	16	1	15
Camel Filters 100's 100FSP .....	18	1.1	19
Camel Lights KFHP .....	10	0.6	12
Camel Lights KFSP .....	9	0.6	11
Camel Lights 100's 100FSP .....	11	0.8	15
Capri 100FHP.....	9	0.8	6
Capri 100FMHP.....	9	0.7	6
Carlton KFHP .....	0	0	0
Carlton KFSP .....	1	0.1	2
Carlton KFMSP.....	1	0.1	1
Carlton 100's 100FHP.....	1	0.1	1
Carlton 100's 100FMHP.....	1	0.1	1
Carlton 100's 100FSP.....	3	0.3	5
Carlton 100's 100FMSP .....	5	0.4	6
Carlton 120's 120FSP .....	6	0.6	6
Carlton 120's 120FMSP .....	6	0.6	5
Century 25's (25) KFSP.....	15	1	18
Century 25's 100's 100FSP .....	18	1.1	21
Century 25's Lights (25) KFSP.....	10	0.7	12
Century 25's Lights 100's 100FSP .....	12	0.9	13

\*Retested brand

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**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results - Rounded Values**

Brand	"Tar" mg/cig	"Nicotine" mg/cig	CO mg/cig
Century 25's Meathol Lights 100's 100FMSP.....	11	0.8	13
Chesterfield RNFSP .....	20	1.3	13
Chesterfield KNFSP .....	24	1.6	15
Doral Full Flavor KFSP .....	17	0.9	20
Doral Full Flavor 100's 100FSP.....	15	0.8	17
Doral Lights KFSP .....	12	0.7	15
Doral Menthol Lights KFMSP .....	12	0.6	14
Doral Lights 100's 100FSP .....	11	0.7	13
Doral Menthol Lights 100's 100FMSP .....	12	0.7	14
Doral Ultra Lights 100's 100FSP .....	7	0.5	12
English Ovals KNFHP .....	24	1.9	16
Eve Slim Lights 100's 100FHP .....	13	1	11
Eve Slim Lights 100's 100FMHP .....	13	1	11
Eve Lights 120's 120FHP .....	13	1.1	12
Eve Lights 120's 120FMHP .....	13	1.2	12
Falcon Lights KFSP .....	11	0.8	11
Falcon Lights KFMSP .....	10	0.8	12
Falcon Lights 100's 100FSP .....	12	0.9	15
Falcon Lights 100's 100FMSP .....	9	0.7	11
Harley Davidson KFSP .....	14	1	16
Herbert Tareyton KNFSP.....	25	1.6	18
Kent Golden Lights KFHP .....	9	0.8	10
Kent Golden Lights KFSP .....	8	0.7	10
Kent Golden Lights KFMSP .....	8	0.8	9
Kent Golden Lights 100s 100FHP .....	10	0.9	11
Kent Golden Lights 100s 100FSP.....	10	0.9	11
Kent Golden Lights 100s 100FMSP.....	9	0.8	10
Kent KFHP .....	11	0.9	13
Kent KFSP .....	12	0.9	14
Kent 100s 100FSP.....	14	1	15
Kent 100s 100FMSP .....	14	1	14
Kent III KFSP.....	3	0.3	4
Kent III 100s 100FHP .....	5	0.5	7
Kent III 100s 100FSP .....	5	0.4	7
Kool RNFMSP .....	21	1.4	14
Kool KFMHP .....	16	1.1	16
Kool KFMSP .....	17	1.1	17
Kool Super Longs 100's 100FMSP.....	17	1.2	17
Kool Lights KFMSP .....	8	0.7	9
Kool Lights 100's 100FMSP.....	9	0.7	10
Kool Milds KFMHP .....	12	0.9	11
Kool Milds KFMSP .....	12	0.9	13
Kool Milds 100's 100FMSP.....	12	1	13
Kool Ultra KFMSP .....	2	0.2	3
Kool Ultra 100's 100FMSP .....	5	0.4	5
L & M KFSP.....	14	1.1	13
L & M Super 100 100FSP .....	14	1.1	14

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results - Rounded Values**

<b>Brand</b>		<b>“Tar” mg/cig</b>	<b>“Nicotine” mg/cig</b>	<b>CO mg/cig</b>
L & M Long Lights 100FSP	8	0.8	6	
L & M 30's Lights 100's 100FSP	13	1.1	11	
Lark KFSP	14	1.1	13	
Lark 100FSP	15	1.2	14	
Lark Lights KFSP	13	1	13	
Lark Light 100's 100FSP	14	1.1	15	
Lucky Strike RNFSP	24	1.5	16	
Lucky Strike KFHP	12	0.9	13	
Lucky Strike KFSP	12	0.9	13	
Lucky Strike Filters 100's 100FSP	12	1	13	
Lucky Strike Menthol 100's 100FMSP	12	1	12	
Lucky Strike Lights KFSP	8	0.7	10	
Lucky Strike Lights 100's 100FSP	9	0.7	10	
Magna KFHP	14	0.9	16	
Magna KFSP	14	0.9	15	
Magna Lites KFSP	9	0.6	14	
Malibu Filters KFSP	16	1.2	14	
Malibu Menthol KFMSP	17	1.2	15	
Malibu 100's 100FSP	14	1.1	13	
Malibu Menthol 100's 100FMSP	12	0.9	13	
Malibu Lights KFSP	10	0.8	11	
Malibu Lights 100's 100FSP	9	0.8	11	
Marlboro KFHP	17	1.1	15	
Marlboro KFSP	17	1.2	17	
*Marlboro KFMSP	17	1.2	15	
Marlboro 100's 100FHP	17	1.2	17	
Marlboro 100's 100FSP	17	1.2	16	
Marlboro 25's KFSP	17	1.1	16	
Marlboro Lights KFHP	11	0.8	12	
Marlboro Lights KFMHP	10	0.8	11	
Marlboro Lights KFSP	11	0.8	12	
Marlboro Lights KFMSP	10	0.8	10	
Marlboro Lights 100's 100FHP	11	0.8	12	
Marlboro Lights 100's 100FHMP	10	0.8	11	
Marlboro Lights 100's 100FSP	11	0.8	13	
Marlboro Lights 100's 100FMSP	11	0.9	12	
Marlboro Lights 25's KFSP	11	0.8	12	
Marlboro 100's Red 100FHP	16	1.2	16	
Marlboro 100's Red 100FSP	17	1.2	17	
Max 120s 120FSP	17	1.3	18	
Max 120s 120FMSP	17	1.4	17	
Merit KFHP	8	0.6	10	
Merit KFSP	8	0.6	10	
Merit KFMSP	8	0.6	10	
Merit 100's 100FSP	10	0.8	12	

\*Retested brand

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results - Rounded Values**

<b>Brand</b>	<b>"Tar" mg/cig</b>	<b>"Nicotine" mg/cig</b>	<b>CO mg/cig</b>
Merit 100's 100FMSP .....	10	0.8	12
Merit Ultra Lights KFSP .....	4	0.4	6
Merit Ultra Lights KFMSP .....	5	0.4	6
Merit Ultra Lights 100's 100FSP .....	5	0.5	7
Merit Ultra Lights 100's 100FMSP .....	6	0.5	8
More 120s 120FSP .....	16	1.2	22
More 120s 120FMSP .....	17	1.3	22
More Lights 100s 100FHP .....	10	0.8	11
More Lights 100s 100FMHP .....	9	0.7	10
More Lights 120s 120FSP .....	13	1	20
More Lights 120s 120FMSP .....	12	1	20
Newport KFMHP .....	16	1.2	16
Newport KFMSP .....	17	1.3	18
Newport 100's 100FMHP .....	19	1.5	19
Newport 100's 100FMSP .....	19	1.5	19
Newport 25's KFMSP .....	17	1.3	18
Newport 25's 100FMSP .....	19	1.5	20
Newport Lights KFMHP .....	9	0.7	10
Newport Lights KFMSP .....	8	0.7	9
Newport Lights 100's 100FMHP .....	9	0.8	10
Newport Lights 100's 100FMSP .....	9	0.8	10
Newport Stripes 100FHP .....	12	0.9	17
Newport Stripes 100FMHP .....	12	0.9	16
Newport Stripes Slim Lights 100FMHP .....	9	0.8	11
Now KFHP .....	0	0	0
Now KFSP .....	1	0.1	2
Now KFMSP .....	1	0.1	2
Now 100s 100FHP .....	0	0	0
Now 100s 100FSP .....	2	0.2	3
Now 100s 100FMSP .....	2	0.3	4
Old Gold Straights KNFSP .....	27	1.9	19
Old Gold Filters KFSP .....	17	1.2	18
Old Gold Filter 100's 100FSP .....	20	1.5	20
Old Gold Lights KFSP .....	9	0.8	11
Old Gold Lights 100s 100FSP .....	12	0.9	17
Pall Mall KNFSP .....	25	1.6	17
Pall Mall 25's KNFSP .....	25	1.6	17
Pall Mall 100's 100FSP .....	17	1.3	17
Pall Mall Lights 100's 100FSP .....	10	0.8	12
Pall Mall Light 100's Low Tar 100FMSP .....	13	1.1	13
Pall Mall Red Filters KFSP .....	14	1	13
Pall Mall Red Filters 100's 100FSP .....	14	1.1	14
Pall Mall Red Lights KFSP .....	10	0.8	11
Pall Mall Red Lights 100's 100FSP .....	11	0.9	12
Parliament Lights KFHP .....	9	0.7	10
Parliament Lights KFSP .....	9	0.7	10
Parliament Lights 100's 100FSP .....	12	0.9	13

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results - Rounded Values**

Brand	"Tar" mg/cig	"Nicotine" mg/cig	CO mg/cig
Philip Morris Commander KNFSP .....	26	1.6	16
Philip Morris International 100FHP .....	17	1.1	16
Philip Morris International 100FMHP .....	17	1.1	16
Players RNFHP .....	25	1.7	16
Players KFHP .....	12	0.8	12
Players KFMHP .....	12	0.8	12
Players 100's 100FHP .....	14	1	13
Players 100's 100FMHP .....	14	1	13
Players Lights 25's KFSP .....	10	0.7	11
Players Lights 25's KFMSP .....	10	0.7	11
Players 25's Lights 100's 100FSP .....	12	0.9	14
Players 25's Lights 100's 100FMSP .....	11	0.8	14
Raleigh KNFSP .....	24	1.4	17
Raleigh KFSP .....	16	1	15
Raleigh 100's 100FSP .....	16	1	16
Raleigh Lights KFSP .....	11	0.9	13
Raleigh Lights 100's 100FSP .....	12	0.9	14
Richland 20's KFSP .....	16	1.1	16
Richland 20's KFMSP .....	16	1	16
Richland 20's 100's 100FSP .....	17	1.2	17
Richland 20's Menthol 100's 100FMSP .....	17	1.2	17
Richland 20's Lights KFSP .....	12	0.9	13
Richland 20's Lights 100's 100FSP .....	12	0.9	14
Richland (25) KFSP .....	17	1.2	16
Richland (25) KFMSP .....	16	1.1	16
Richland 100's (25) 100FSP .....	17	1.3	17
Richland 100's (25) 100FMSP .....	16	1.2	16
Richland Lights (25) KFSP .....	12	0.9	13
Richland Lights (25) 100's 100FSP .....	12	0.9	14
Ritz 100 100FHP .....	10	0.8	11
Ritz 100 100FMHP .....	11	0.8	12
Salem KFMSP .....	16	1	17
Salem 100's 100FMSP .....	17	1.2	16
Salem Lights KFMSP .....	10	0.7	13
Salem Lights 100's 100FMHP .....	11	0.9	12
Salem Lights 100's 100FMSP .....	9	0.7	11
Salem Slim Lights 100's 100FMHP .....	10	0.8	10
Salem Ultra Lights KFMSP .....	5	0.4	8
Salem Ultra Lights 100's 100FMSP .....	5	0.4	8
Saratoga 120's 120FHP .....	15	1.1	15
Saratoga 120's 120FMHP .....	15	1.1	15
Satin 100FSP .....	11	1	13
Satin 100FMSP .....	11	1	13
Silva Thins Filters 100FHP .....	12	1	13
Silva Thins Menthol 100FMHP .....	11	0.9	12
Silva Thins 100FSP .....	12	1	10
Silva Thins Menthol 100FMSP .....	12	1.1	10

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results - Rounded Values**

Brand	"Tar" mg/cig	"Nicotine" mg/cig	CO mg/cig
Spring 100's 100FMSP .....	19	1.5	19
Tall 120s 120FSP .....	20	1.6	20
Tall 120s 120FMSP .....	18	1.6	16
Tareyton KFSP .....	14	1	16
Tareyton 100's 100FSP .....	14	1	17
Tareyton Lights KFSP .....	5	0.4	6
Tareyton Long Lights 100FSP .....	8	0.7	9
Triumph KFSP .....	3	0.3	4
Triumph KFMSP .....	4	0.3	4
Triumph 100s 100FSP .....	5	0.5	7
Triumph 100s 100FMSP .....	5	0.5	8
True KFSP .....	5	0.5	6
True KFMSP .....	5	0.5	6
True 100's 100FSP .....	7	0.6	7
True 100's 100FMSP .....	7	0.6	7
Vantage KFSP .....	11	0.8	13
Vantage KFMSP .....	10	0.7	13
Vantage 100s 100FSP .....	9	0.6	13
Vantage Menthol 100s 100FMSP .....	8	0.6	13
Vantage Ultra Lights KFSP .....	6	0.5	8
Vantage Ultra Lights 100s 100FSP .....	6	0.5	9
Viceroy KFSP .....	15	1	15
Viceroy Super Long 100's 100FSP .....	16	1.1	15
Viceroy Lights KFSP .....	11	0.9	13
Viceroy Lights 100's 100FSP .....	12	0.9	14
Virginia Slims 100FSP .....	15	1.1	14
Virginia Slims 100FMSP .....	15	1.1	14
Virginia Slims Lights 100FHP .....	9	0.7	9
Virginia Slims Lights 100FMHP .....	9	0.7	9
*Virginia Slims Lights 120's 120FHP .....	15	1.1	15
*Virginia Slims Lights 120's 120FMHP .....	15	1.1	15
Winston KFHP .....	17	1.1	17
Winston KFSP .....	17	1.1	16
Winston 100's 100FSP .....	17	1.1	19
Winston Lights KFHP .....	10	0.6	12
Winston Lights KFSP .....	11	0.8	13
Winston Lights 100's 100FHP .....	10	0.7	12
Winston Lights 100's 100FSP .....	11	0.8	13
Winston Ultra Lights KFSP .....	5	0.5	8
Winston Ultra Lights 100's 100FSP .....	5	0.5	9
Craven "A" KFHP .....	16	1.2	16
Craven "A" Filter Standard Size RFHP .....	19	1.5	14
Dunhill International 100FHP .....	15	1.4	18
Dunhill Menthol 100FMHP .....	14	1.2	17
Dunhill Menthol Mild 100FMHP .....	10	1	13

\*Retested brand

**Tobacco Institute Testing Laboratory  
Market Sample 31  
Test Results - Rounded Values**

<b>Brand</b>	<b>"Tar" mg/cig</b>	<b>"Nicotine" mg/cig</b>	<b>CO mg/cig</b>
Dunhill International Superior Mild 100FHP .....	8	0.7	10
Rothmans KFHP .....	19	1.3	23
Rothmans Special Mild KFHP .....	14	1	16
St. Moritz Filter 100s 100FSP .....	15	1.1	16
St. Moritz Menthol 100FMSP .....	15	1	17

## **Appendix A -- Test Results**

**PM3001059840**

Source: <https://www.industrydocuments.ucsf.edu/docs/nkkk0001>

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results - American Brands**

<b>Brand</b>	<b>"Tar" mg/cig</b>	<b>"Nicotine" mg/cig</b>	<b>CO mg/cig</b>
American Lights KFSP.....	11.9±0.2	0.91±0.02	12.9±0.3
American Lights 100's 100FSP.....	13.3±0.2	1.08±0.01	13.9±0.2
Carlton KFHP.....	< 0.5	< 0.05	< 0.5
Carlton KFSP.....	1.3±0.1	0.15±0.01	2.4±0.1
Carlton KFMSP.....	0.6±0.1	0.09±0.01	1.4±0.1
Carlton 100's 100FHP.....	0.7±0.1	0.10±0.01	1.1±0.1
Carlton 100's 100FMHP.....	0.6±0.1	0.10±0.01	1.0±0.1
Carlton 100's 100FSP.....	3.4±0.1	0.35±0.01	4.6±0.2
Carlton 100's 100FMSP.....	4.5±0.1	0.42±0.01	6.4±0.2
Carlton 120's 120FSP.....	6.5±0.2	0.62±0.02	5.6±0.2
Carlton 120's 120FMSP.....	6.2±0.2	0.62±0.03	5.5±0.2
Herbert Tareyton KNFSP.....	25.1±0.9	1.58±0.03	17.8±0.4
Lucky Strike RNFSP.....	24.4±0.5	1.52±0.02	16.5±0.3
Lucky Strike KFHP.....	12.1±0.2	0.92±0.02	12.8±0.4
Lucky Strike KFSP.....	11.8±0.3	0.89±0.02	12.6±0.3
Lucky Strike Filters 100's 100FSP.....	11.9±0.2	0.96±0.02	12.7±0.2
Lucky Strike Menthol 100's 100FMSP.....	11.8±0.1	0.96±0.02	12.3±0.2
Lucky Strike Lights KFSP.....	8.4±0.3	0.68±0.02	10.2±0.3
Lucky Strike Lights 100's 100FSP.....	8.9±0.2	0.74±0.01	10.0±0.3
Malibu Filters KFSP.....	16.4±0.3	1.18±0.03	13.6±0.3
Malibu Menthol KFMSP.....	17.2±0.2	1.24±0.02	14.8±0.2
Malibu 100's 100FSP.....	13.9±0.3	1.10±0.02	13.4±0.3
Malibu Menthol 100's 100FMSP.....	11.6±0.2	0.94±0.02	12.5±0.3
Malibu Lights KFSP.....	10.2±0.2	0.79±0.01	10.8±0.3
Malibu Lights 100's 100FSP.....	9.1±0.2	0.75±0.02	10.6±0.4
Pall Mall KNFSP.....	24.9±0.3	1.64±0.02	16.6±0.4
Pall Mall 25's KNFSP.....	24.7±0.3	1.64±0.03	16.5±0.3
Pall Mall 100's 100FSP.....	17.0±0.3	1.28±0.02	17.1±0.3
Pall Mall Lights 100's 100FSP.....	10.3±0.2	0.84±0.02	12.0±0.3
Pall Mall Light 100's Low Tar 100FMSP.....	13.3±0.2	1.08±0.02	13.1±0.3
Pall Mall Red Filters KFSP.....	13.6±0.3	1.02±0.02	12.6±0.3
Pall Mall Red Filters 100's 100FSP.....	13.8±0.3	1.07±0.02	14.0±0.2
Pall Mall Red Lights KFSP.....	10.3±0.3	0.81±0.02	10.7±0.3
Pall Mall Red Lights 100's 100FSP.....	11.1±0.2	0.88±0.02	12.2±0.4
Silva Thins Filters 100FHP.....	12.2±0.2	0.97±0.02	12.5±0.3
Silva Thins Menthol 100FMHP.....	11.1±0.2	0.90±0.01	11.7±0.3
Silva Thins 100FSP.....	11.7±0.2	0.98±0.02	10.0±0.2
Silva Thins Menthol 100FMSP.....	12.3±0.3	1.05±0.02	10.5±0.3
Tall 120s 120FSP.....	20.4±0.3	1.64±0.03	20.2±0.4
Tall 120s 120FMSP.....	18.0±0.3	1.57±0.03	16.5±0.5
Tareyton KFSP.....	14.3±0.3	0.98±0.02	15.9±0.3
Tareyton 100's 100FSP.....	14.1±0.2	1.02±0.02	16.8±0.4
Tareyton Lights KFSP.....	5.2±0.2	0.44±0.01	6.0±0.2
Tareyton Long Lights 100FSP.....	8.1±0.2	0.68±0.01	8.8±0.3

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results - Brown & Williamson Brands**

Brand	Tar mg/cig	Nicotine mg/cig	CO mg/cig
Belair KFMSP .....	10.7±0.2	0.84±0.01	9.8±0.2
Belair 100's 100FMSP .....	8.8±0.2	0.67±0.02	9.1±0.2
Capri 100FHP .....	9.2±0.2	0.78±0.02	6.4±0.2
Capri 100FMHP .....	8.9±0.2	0.73±0.02	6.0±0.2
Falcon Lights KFSP .....	11.2±0.2	0.77±0.02	11.2±0.3
Falcon Lights KFMSP .....	10.2±0.3	0.78±0.02	11.9±0.4
Falcon Lights 100's 100FSP .....	12.1±0.2	0.85±0.02	14.8±0.4
Falcon Lights 100's 100FMSP .....	8.9±0.2	0.73±0.02	11.0±0.3
Kool RNFMS .....	21.5±0.8	1.36±0.03	14.5±0.2
Kool KFMHP .....	16.2±0.4	1.12±0.03	16.4±0.4
Kool KFMSP .....	16.8±0.3	1.14±0.02	16.8±0.3
Kool Super Longs 100's 100FMSP .....	16.7±0.3	1.25±0.02	17.0±0.3
Kool Lights KFMSP .....	8.2±0.2	0.69±0.02	9.0±0.2
Kool Lights 100's 100FMSP .....	8.5±0.2	0.73±0.01	10.0±0.3
Kool Milds KFMHP .....	11.6±0.3	0.88±0.02	11.3±0.3
Kool Milds KFMSP .....	12.3±0.3	0.93±0.02	13.1±0.3
Kool Milds 100's 100FMSP .....	12.0±0.3	0.95±0.02	12.6±0.4
Kool Ultra KFMSP .....	2.2±0.2	0.21±0.02	2.7±0.2
Kool Ultra 100's 100FMSP .....	5.0±0.3	0.45±0.02	5.2±0.3
Raleigh KNFSP .....	23.8±0.5	1.40±0.03	16.6±0.4
Raleigh KFSP .....	15.5±0.4	0.97±0.03	14.7±0.3
Raleigh 100's 100FSP .....	15.5±0.3	0.99±0.02	16.0±0.3
Raleigh Lights KFSP .....	11.4±0.2	0.87±0.02	13.1±0.3
Raleigh Lights 100's 100FSP .....	12.2±0.3	0.94±0.02	14.3±0.3
Richland 20's KFSP .....	16.3±0.3	1.13±0.02	16.0±0.3
Richland 20's KFMSP .....	16.4±0.4	1.05±0.02	16.1±0.3
Richland 20's 100's 100FSP .....	16.6±0.3	1.23±0.02	17.3±0.4
Richland 20's Menthol 100's 100FMSP .....	16.7±0.3	1.15±0.02	17.1±0.3
Richland 20's Lights KFSP .....	11.7±0.3	0.90±0.02	13.5±0.3
Richland 20's Lights 100's 100FSP .....	12.1±0.2	0.90±0.02	14.2±0.4
Richland (25) KFSP .....	16.6±0.2	1.18±0.02	15.8±0.2
Richland (25) KFMSP .....	16.2±0.3	1.09±0.02	15.6±0.3
Richland 100's (25) 100FSP .....	17.0±0.3	1.28±0.02	17.3±0.4
Richland 100's (25) 100FMSP .....	16.0±0.3	1.16±0.02	16.3±0.4
Richland Lights (25) KFSP .....	11.5±0.2	0.89±0.02	12.7±0.3
Richland Lights (25) 100's 100FSP .....	12.4±0.2	0.94±0.02	14.0±0.2
Viceroy KFSP .....	15.3±0.3	0.97±0.02	14.5±0.3
Viceroy Super Long 100's 100FSP .....	15.9±0.3	1.14±0.02	15.1±0.3
Viceroy Lights KFSP .....	11.3±0.3	0.88±0.02	13.1±0.3
Viceroy Lights 100's 100FSP .....	11.9±0.2	0.92±0.02	14.1±0.3

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results - Liggett & Myers Brands**

Brand	"Tar" mg/cig	"Nicotine" mg/cig	CO mg/cig
Chesterfield RNFSP .....	20.0±0.5	1.30±0.03	13.3±0.4
Chesterfield KNFSP .....	24.2±0.5	1.65±0.04	15.3±0.5
Eve Slim Lights 100's 100FHP .....	12.8±0.2	1.03±0.02	11.0±0.2
Eve Slim Lights 100's 100FMHP .....	12.6±0.3	1.00±0.02	10.8±0.3
Eve Lights 120's 120FHP .....	13.0±0.4	1.12±0.03	11.6±0.5
Eve Lights 120's 120FMHP .....	13.5±0.2	1.17±0.02	12.0±0.3
L & M KFSP .....	13.7±0.2	1.08±0.02	12.9±0.3
L & M Super 100 100FSP .....	13.9±0.2	1.12±0.02	14.2±0.3
L & M Long Lights 100FSP .....	7.8±0.2	0.80±0.02	6.3±0.2
L & M 30's Lights 100's 100FSP .....	12.6±0.3	1.06±0.02	10.7±0.3
Lark KFSP .....	14.3±0.3	1.11±0.03	13.3±0.3
Lark 100FSP .....	14.7±0.2	1.22±0.02	14.0±0.2
Lark Lights KFSP .....	13.4±0.3	1.03±0.02	13.3±0.3
Lark Light 100's 100FSP .....	13.9±0.3	1.15±0.03	14.5±0.5

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results - Lorillard Brands**

Brand	"Tar" mg/cig	"Nicotine" mg/cig	CO mg/cig
Harley Davidson KFSP .....	14.1±0.3	0.98±0.02	16.3±0.4
Kent Golden Lights KFHP .....	8.8±0.3	0.78±0.02	9.7±0.4
Kent Golden Lights KFSP .....	8.5±0.2	0.74±0.02	9.6±0.3
Kent Golden Lights KFMSP .....	8.3±0.3	0.75±0.02	9.1±0.4
Kent Golden Lights 100s 100FHP .....	10.2±0.2	0.91±0.02	11.2±0.4
Kent Golden Lights 100s 100FSP .....	9.6±0.3	0.86±0.02	10.5±0.4
Kent Golden Lights 100s 100FMSP .....	9.3±0.2	0.85±0.02	10.0±0.3
Kent KFHP .....	11.3±0.2	0.86±0.02	12.9±0.3
Kent KFSP .....	12.0±0.2	0.88±0.02	13.9±0.3
Kent 100s 100FSP .....	13.6±0.3	1.02±0.02	14.7±0.4
Kent 100s 100FMSP .....	14.0±0.2	1.04±0.01	14.4±0.3
Kent III KFSP .....	3.4±0.2	0.35±0.02	4.3±0.2
Kent III 100s 100FHP .....	5.0±0.2	0.50±0.03	6.8±0.3
Kent III 100s 100FSP .....	4.7±0.2	0.45±0.01	6.6±0.3
Max 120s 120FSP .....	17.1±0.4	1.34±0.03	17.7±0.4
Max 120s 120FMSP .....	17.2±0.4	1.38±0.03	17.0±0.5
Newport KFMHP .....	15.7±0.2	1.17±0.02	16.5±0.3
Newport KFMSP .....	17.2±0.4	1.26±0.02	18.3±0.5
Newport 100's 100FMHP .....	19.2±0.2	1.46±0.02	19.4±0.4
Newport 100's 100FMSP .....	19.3±0.3	1.47±0.03	19.4±0.4
Newport 25's KFMSP .....	17.2±0.2	1.28±0.02	18.2±0.4
Newport 25's 100FMSP .....	19.5±0.3	1.48±0.02	19.8±0.3
Newport Lights KFMHP .....	8.6±0.2	0.73±0.02	9.5±0.3
Newport Lights KFMSP .....	8.3±0.3	0.75±0.02	9.1±0.3
Newport Lights 100's 100FMHP .....	9.2±0.3	0.84±0.02	9.9±0.3
Newport Lights 100's 100FMSP .....	9.0±0.3	0.83±0.02	9.5±0.4
Newport Stripes 100FHP .....	12.3±0.3	0.94±0.02	16.6±0.4
Newport Stripes 100FMHP .....	12.2±0.2	0.91±0.02	16.5±0.2
Newport Stripes Slim Lights 100FMHP .....	9.3±0.2	0.76±0.02	11.4±0.2
Old Gold Straights KNFSP .....	26.9±0.6	1.89±0.05	18.7±0.5
Old Gold Filters KFSP .....	16.8±0.2	1.24±0.02	18.1±0.3
Old Gold Filter 100's 100FSP .....	19.7±0.3	1.50±0.03	19.6±0.4
Old Gold Lights KFSP .....	9.3±0.2	0.81±0.02	10.9±0.3
Old Gold Lights 100s 100FSP .....	12.3±0.2	0.91±0.02	17.0±0.3
Satin 100FSP .....	11.4±0.3	0.97±0.02	13.1±0.4
Satin 100FMSP .....	11.4±0.3	0.97±0.02	13.3±0.4
Spring 100's 100FMSP .....	19.3±0.2	1.49±0.03	19.0±0.2
Triumph KFSP .....	3.1±0.1	0.32±0.02	3.8±0.2
Triumph KFMSP .....	3.5±0.2	0.34±0.02	4.3±0.2
Triumph 100s 100FSP .....	5.3±0.3	0.50±0.02	7.4±0.4
Triumph 100s 100FMSP .....	5.4±0.2	0.52±0.01	7.5±0.2
True KFSP .....	5.1±0.2	0.48±0.02	6.4±0.3
True KFMSP .....	4.9±0.3	0.46±0.02	6.1±0.4
True 100's 100FSP .....	6.7±0.3	0.61±0.02	7.4±0.4
True 100's 100FMSP .....	6.7±0.4	0.61±0.03	7.3±0.5

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results - Philip Morris Brands**

Brand	"Tar" mg/cig	"Nicotine" mg/cig	CO mg/cig
*Alpine KFMSP .....	17.1±0.2	1.14±0.02	16.5±0.2
Benson & Hedges KFHP.....	15.4±0.2	1.26±0.02	12.6±0.3
*Benson & Hedges 100's 100FHP .....	17.3±0.2	1.20±0.03	17.0±0.4
*Benson & Hedges 100's 100FMHP .....	17.4±0.2	1.22±0.01	17.2±0.3
*Benson & Hedges 100's 100FSP .....	17.3±0.2	1.22±0.02	16.4±0.4
*Benson & Hedges 100's 100FMSP .....	17.1±0.2	1.20±0.02	16.4±0.3
Benson & Hedges Deluxe Ultra Lights 100's 100FHP .....	5.0±0.2	0.44±0.02	6.2±0.3
Benson & Hedges Deluxe Ultra Lights 100's 100FMHP .....	5.2±0.1	0.47±0.01	6.2±0.2
Benson & Hedges Lights 100's 100FSP .....	10.7±0.2	0.83±0.02	13.0±0.3
Benson & Hedges Lights 100's 100FMSP .....	10.7±0.2	0.81±0.02	12.0±0.2
Benson & Hedges Multifilter KFSP.....	11.2±0.3	0.85±0.02	10.8±0.2
Cambridge Full Flavor KFSP .....	17.1±0.3	1.09±0.01	16.1±0.3
Cambridge Full Flavor 100's 100FSP .....	17.2±0.3	1.17±0.02	16.0±0.3
Cambridge Lights KFSP .....	12.3±0.2	0.85±0.01	12.7±0.3
Cambridge Lights KFMSP .....	11.9±0.2	0.84±0.02	12.1±0.3
Cambridge Lights 100's 100FSP .....	12.0±0.2	0.87±0.02	14.5±0.4
Cambridge Lights 100's 100FMSP .....	11.9±0.2	0.86±0.01	14.6±0.4
Cambridge Ultra Low Tar 100's 100FSP .....	4.7±0.2	0.41±0.01	6.6±0.3
English Ovals KNFHP .....	23.8±0.6	1.87±0.04	15.6±0.5
Marlboro KFHP.....	17.0±0.2	1.14±0.02	15.2±0.3
Marlboro KFSP.....	17.4±0.2	1.17±0.02	16.9±0.4
*Marlboro KFMSP .....	17.1±0.3	1.18±0.01	15.3±0.2
Marlboro 100's 100FHP .....	17.0±0.4	1.22±0.03	16.9±0.6
Marlboro 100's 100FSP .....	17.1±0.3	1.22±0.02	16.5±0.4
Marlboro 25's KFSP .....	17.2±0.3	1.13±0.02	15.9±0.3
Marlboro Lights KFHP .....	11.0±0.2	0.82±0.02	12.4±0.3
Marlboro Lights KFMHP .....	10.2±0.2	0.78±0.02	11.2±0.3
Marlboro Lights KFSP .....	11.2±0.2	0.83±0.02	12.2±0.3
Marlboro Lights KFMSP .....	9.9±0.2	0.77±0.01	10.4±0.3
Marlboro Lights 100's 100FHP .....	10.8±0.2	0.85±0.02	12.3±0.3
Marlboro Lights 100's 100FHMP .....	10.2±0.2	0.81±0.02	11.2±0.4
Marlboro Lights 100's 100FSP .....	11.0±0.2	0.85±0.02	13.0±0.4
Marlboro Lights 100's 100FMSP .....	10.9±0.1	0.86±0.01	12.0±0.3
Marlboro Lights 25's KFSP .....	11.2±0.2	0.80±0.02	12.4±0.3
Marlboro 100's Red 100FHP .....	16.4±0.3	1.19±0.02	16.3±0.4
Marlboro 100's Red 100FSP .....	16.5±0.2	1.19±0.02	17.0±0.2
Merit KFHP.....	7.8±0.2	0.60±0.01	9.8±0.2
Merit KFSP.....	7.6±0.2	0.59±0.01	9.8±0.3
Merit KFMSP .....	7.7±0.2	0.58±0.01	10.0±0.3
Merit 100's 100FSP .....	10.0±0.2	0.80±0.02	11.8±0.3
Merit 100's 100FMSP .....	10.1±0.2	0.78±0.02	12.0±0.3
Merit Ultra Lights KFSP .....	4.4±0.2	0.43±0.01	5.5±0.2
Merit Ultra Lights KFMSp .....	4.5±0.1	0.42±0.01	5.9±0.2
Merit Ultra Lights 100's 100FSP .....	5.3±0.1	0.50±0.01	7.4±0.2
Merit Ultra Lights 100's 100FMSP .....	6.0±0.2	0.53±0.02	8.2±0.3

\*Retested brand

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results - Philip Morris Brands**

<b>Brand</b>	<b>“Tar” mg/cig</b>	<b>“Nicotine” mg/cig</b>	<b>CO mg/cig</b>
Parliament Lights KFHP .....	9.5±0.2	0.72±0.02	10.3±0.4
Parliament Lights KFSP.....	9.1±0.2	0.71±0.02	10.4±0.2
Parliament Lights 100's 100FSP .....	12.0±0.2	0.95±0.02	12.7±0.2
Philip Morris Commander KNFSP .....	26.3±0.5	1.61±0.03	16.2±0.5
Philip Morris International 100FHP .....	16.8±0.4	1.15±0.02	15.6±0.4
Philip Morris International 100FMHP.....	16.9±0.2	1.08±0.02	16.2±0.4
Players RNFHP .....	25.2±0.4	1.74±0.03	15.9±0.4
Players KFHP .....	11.7±0.2	0.83±0.02	12.2±0.2
Players KFMHP .....	11.9±0.2	0.82±0.01	12.3±0.2
Players 100's 100FHP .....	13.9±0.2	0.98±0.02	12.9±0.3
Players 100's 100FMHP .....	14.0±0.2	0.98±0.02	12.7±0.3
Players Lights 25's KFSP.....	10.0±0.2	0.72±0.02	11.1±0.2
Players Lights 25's KFMSP .....	10.0±0.2	0.71±0.01	11.1±0.4
Players 25's Lights 100's 100FSP .....	11.9±0.3	0.86±0.02	14.1±0.4
Players 25's Lights 100's 100FMSP .....	11.4±0.2	0.81±0.01	13.7±0.3
Saratoga 120's 120FHP.....	14.7±0.2	1.07±0.02	14.8±0.3
Saratoga 120's 120FMHP.....	14.7±0.3	1.07±0.02	14.8±0.4
Virginia Slims 100FSP .....	15.3±0.2	1.07±0.02	13.8±0.3
Virginia Slims 100FMSP .....	15.1±0.3	1.06±0.03	13.9±0.3
Virginia Slims Lights 100FHP .....	8.8±0.2	0.70±0.02	9.3±0.3
Virginia Slims Lights 100FMHP .....	8.5±0.2	0.69±0.02	9.2±0.2
*Virginia Slims Lights 120's 120FHP .....	14.8±0.2	1.09±0.02	15.2±0.3
*Virginia Slims Lights 120's 120FMHP .....	14.9±0.2	1.08±0.01	14.9±0.2

\*Retested brand

Rev. 5/89

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results - R.J. Reynolds Brands**

Brand	"Tar" mg/cig	"Nicotine" mg/cig	CO mg/cig
Bright 100s 100FMSP .....	6.0±0.1	0.44±0.01	10.3±0.3
Camel RNFSP .....	22.0±0.3	1.39±0.02	14.2±0.4
Camel Filters KFHP .....	16.8±0.2	1.06±0.02	16.6±0.3
Camel Filters KFSP .....	15.6±0.3	1.01±0.02	15.4±0.2
Camel Filters 100's 100FSP .....	17.5±0.2	1.06±0.01	18.7±0.3
Camel Lights KFHP .....	9.9±0.2	0.64±0.01	11.8±0.3
Camel Lights KFSP .....	8.8±0.2	0.65±0.01	11.3±0.3
Camel Lights 100's 100FSP .....	11.4±0.2	0.81±0.01	15.0±0.3
Century 25's (25) KFSP .....	15.3±0.3	0.99±0.02	17.8±0.3
Century 25's 100's 100FSP .....	17.5±0.3	1.13±0.02	20.9±0.5
Century 25's Lights (25) KFSP .....	9.7±0.2	0.70±0.02	11.8±0.3
Century 25's Lights 100's 100FSP .....	11.9±0.3	0.89±0.02	13.4±0.3
Century 25's Menthol Lights 100's 100FMSP .....	11.5±0.2	0.84±0.01	13.2±0.3
Doral Full Flavor KFSP .....	17.4±0.2	0.92±0.01	19.6±0.4
Doral Full Flavor 100's 100FSP .....	14.8±0.2	0.84±0.01	17.2±0.3
Doral Lights KFSP .....	12.1±0.3	0.67±0.02	14.5±0.4
Doral Menthol Lights KFMSP .....	11.7±0.2	0.64±0.01	14.0±0.2
Doral Lights 100's 100FSP .....	11.3±0.3	0.70±0.02	12.9±0.3
Doral Menthol Lights 100's 100FMSP .....	12.1±0.3	0.73±0.01	13.7±0.3
Doral Ultra Lights 100's 100FSP .....	6.7±0.3	0.48±0.02	11.7±0.5
Magna KFHP .....	14.1±0.3	0.90±0.01	16.3±0.4
Magna KFSP .....	13.9±0.2	0.91±0.02	14.9±0.2
Magna Lites KFSP .....	9.1±0.2	0.64±0.01	13.7±0.2
More 120s 120FSP .....	16.5±0.4	1.19±0.02	21.5±0.4
More 120s 120FMSP .....	16.6±0.3	1.28±0.03	22.0±0.5
More Lights 100s 100FHP .....	10.0±0.2	0.78±0.02	10.7±0.3
More Lights 100s 100FMHP .....	9.0±0.3	0.69±0.03	10.2±0.3
More Lights 120s 120FSP .....	12.9±0.2	0.98±0.01	20.2±0.5
More Lights 120s 120FMSP .....	12.2±0.4	0.99±0.03	19.6±0.5
Now KFHP .....	< 0.5	< 0.05	< 0.5
Now KFSP .....	1.0±0.1	0.14±0.01	2.3±0.1
Now KFMSP .....	1.1±0.1	0.13±0.01	2.3±0.1
Now 100s 100FHP .....	< 0.5	< 0.05	< 0.5
Now 100s 100FSP .....	1.9±0.1	0.21±0.01	3.1±0.2
Now 100s 100FMSP .....	2.5±0.1	0.26±0.01	4.3±0.2
Ritz 100 100FHP .....	10.4±0.3	0.78±0.02	11.5±0.4
Ritz 100 100FMHP .....	11.1±0.3	0.81±0.02	11.5±0.3
Salem KFMSP .....	15.9±0.3	1.04±0.02	16.7±0.3
Salem 100's 100FMSP .....	16.8±0.3	1.19±0.02	16.1±0.3
Salem Lights KFMSP .....	9.8±0.2	0.72±0.02	12.6±0.2
Salem Lights 100's 100FMHP .....	11.3±0.2	0.86±0.02	11.6±0.2
Salem Lights 100's 100FMSP .....	9.3±0.3	0.74±0.02	11.1±0.4
Salem Slim Lights 100's 100FMHP .....	9.5±0.2	0.77±0.02	10.2±0.3
Salem Ultra Lights KFMSP .....	4.9±0.1	0.43±0.01	7.7±0.2
Salem Ultra Lights 100's 100FMSP .....	5.1±0.1	0.45±0.01	8.0±0.2
Vantage KFSP .....	10.5±0.2	0.75±0.02	13.5±0.3
Vantage KFMSP .....	10.0±0.2	0.69±0.01	12.5±0.3

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results - R.J. Reynolds Brands**

<b>Brand</b>	<b>"Tar" mg/cig</b>	<b>"Nicotine" mg/cig</b>	<b>CO mg/cig</b>
Vantage 100s 100FSP .....	8.8±0.2	0.63±0.02	12.5±0.3
Vantage Menthol 100s 100FMSP.....	8.3±0.2	0.61±0.01	12.7±0.3
Vantage Ultra Lights KFSP.....	5.5±0.1	0.47±0.01	8.0±0.2
Vantage Ultra Lights 100s 100FSP .....	5.8±0.1	0.50±0.01	9.5±0.2
Winston KFHP.....	16.8±0.3	1.06±0.02	16.9±0.3
Winston KFSP .....	17.1±0.3	1.13±0.02	16.3±0.2
Winston 100's 100FSP .....	16.9±0.2	1.06±0.02	18.6±0.3
Winston Lights KFHP .....	9.7±0.2	0.63±0.01	11.7±0.3
Winston Lights KFSP .....	10.7±0.2	0.75±0.01	13.2±0.3
Winston Lights 100's 100FHP .....	9.9±0.2	0.72±0.02	11.8±0.3
Winston Lights 100's 100FSP .....	11.4±0.2	0.81±0.01	13.4±0.3
Winston Ultra Lights KFSP.....	5.5±0.2	0.46±0.01	8.5±0.2
Winston Ultra Lights 100's 100FSP .....	5.3±0.2	0.47±0.02	9.0±0.3

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Test Results - Larus & Brother Brands**

<b>Brand</b>	<b>“Tar” mg/cig</b>	<b>“Nicotine” mg/cig</b>	<b>CO mg/cig</b>
Craven A KFHP.....	15.8±0.4	1.15±0.02	16.3±0.4
Craven A Filter Standard Size RFHP.....	18.6±0.4	1.51±0.03	13.6±0.3
Dunhill International 100FHP.....	15.2±0.3	1.39±0.03	17.6±0.3
Dunhill Menthol 100FMHP .....	14.2±0.3	1.19±0.02	17.0±0.4
Dunhill Menthol Mild 100FMHP .....	10.4±0.2	0.96±0.02	12.5±0.2
Dunhill International Superior Mild 100FHP.....	8.4±0.2	0.73±0.01	10.5±0.2
Rothmans KFHP.....	19.4±0.4	1.34±0.02	22.5±0.7
Rothmans Special Mild KFHP.....	13.6±0.2	1.03±0.02	15.5±0.4
St. Moritz Filter 100s 100FSP.....	14.9±0.2	1.08±0.02	15.5±0.2
St. Moritz Menthol 100FMSP .....	14.9±0.3	0.96±0.01	17.1±0.4

## **Appendix B -- Sorted Results**

**PM3001059850**

Source: <https://www.industrydocuments.ucsf.edu/docs/nkkk0001>

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted "Tar" Results**

Brand	"Tar" mg/cig	"Nicotine" mg/cig	CO mg/cig
Carlton KFHP .....	<0.5	<0.05	<0.5
Now 100s 100FHP .....	<0.5	<0.05	<0.5
Now KFHP .....	<0.5	<0.05	<0.5
Now KFSP .....	0.6±0.1	0.09±0.01	1.4±0.1
Now KFMSP .....	0.6±0.1	0.10±0.01	1.0±0.1
Carlton KFMSP .....	0.7±0.1	0.10±0.01	1.1±0.1
Carlton 100's 100FMHP .....	1.0±0.1	0.14±0.01	2.3±0.1
Carlton 100's 100FHP .....	1.1±0.1	0.13±0.01	2.3±0.1
Carlton KFSP .....	1.3±0.1	0.15±0.01	2.4±0.1
Now 100s 100FSP .....	1.9±0.1	0.21±0.01	3.1±0.2
Kool Ultra KFMSP .....	2.2±0.2	0.21±0.02	2.7±0.2
Now 100s 100FMSP .....	2.5±0.1	0.26±0.01	4.3±0.2
Triumph KFSP .....	3.1±0.1	0.32±0.02	3.8±0.2
Carlton 100's 100FSP .....	3.4±0.1	0.35±0.01	4.6±0.2
Kent III KFSP .....	3.4±0.2	0.35±0.02	4.3±0.2
Triumph KFMSP .....	3.5±0.2	0.34±0.02	4.3±0.2
Merit Ultra Lights KFSP .....	4.4±0.2	0.43±0.01	5.5±0.2
Carlton 100's 100FMSP .....	4.5±0.1	0.42±0.01	6.4±0.2
Merit Ultra Lights KFMSP .....	4.5±0.1	0.42±0.01	5.9±0.2
Cambridge Ultra Low Tar 100's 100FSP .....	4.7±0.2	0.41±0.01	6.6±0.3
Kent III 100s 100FSP .....	4.7±0.2	0.45±0.01	6.6±0.3
True KFMSP .....	4.9±0.3	0.46±0.02	6.1±0.4
Salem Ultra Lights KFMSP .....	4.9±0.1	0.43±0.01	7.7±0.2
Kent III 100s 100FHP .....	5.0±0.2	0.50±0.03	6.8±0.3
Kool Ultra 100's 100FMSP .....	5.0±0.3	0.45±0.02	5.2±0.3
Benson & Hedges Deluxe Ultra Lights 100's 100FHP .....	5.0±0.2	0.44±0.02	6.2±0.3
True KFSP .....	5.1±0.2	0.48±0.02	6.4±0.3
Salem Ultra Lights 100's 100FMSP .....	5.1±0.1	0.45±0.01	8.0±0.2
Tareyton Lights KFSP .....	5.2±0.2	0.44±0.01	6.0±0.2
Benson & Hedges Deluxe Ultra Lights 100's 100FMHP .....	5.2±0.1	0.47±0.01	6.2±0.2
Merit Ultra Lights 100's 100FSP .....	5.3±0.1	0.50±0.01	7.4±0.2
Triumph 100s 100FSP .....	5.3±0.3	0.50±0.02	7.4±0.4
Winston Ultra Lights 100's 100FSP .....	5.3±0.2	0.47±0.02	9.0±0.3
Triumph 100s 100FMSP .....	5.4±0.2	0.52±0.01	7.5±0.2
Winston Ultra Lights KFSP .....	5.5±0.2	0.46±0.01	8.5±0.2
Vantage Ultra Lights KFSP .....	5.5±0.1	0.47±0.01	8.0±0.2
Vantage Ultra Lights 100s 100FSP .....	5.8±0.1	0.50±0.01	9.5±0.2
Merit Ultra Lights 100's 100FMSP .....	6.0±0.2	0.53±0.02	8.2±0.3
Bright 100s 100FMSP .....	6.0±0.1	0.44±0.01	10.3±0.3
Carlton 120's 120FMSP .....	6.2±0.2	0.62±0.03	5.5±0.2
Carlton 120's 120FSP .....	6.5±0.2	0.62±0.02	5.6±0.2
Doral Ultra Lights 100's 100FSP .....	6.7±0.3	0.48±0.02	11.7±0.5
True 100's 100FMSP .....	6.7±0.4	0.61±0.03	7.3±0.5
True 100's 100FSP .....	6.7±0.3	0.61±0.02	7.4±0.4
Merit KFSP .....	7.6±0.2	0.59±0.01	9.8±0.3
Merit KFMSP .....	7.7±0.2	0.58±0.01	10.0±0.3
L & M Long Lights 100FSP .....	7.8±0.2	0.80±0.02	6.3±0.2

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted "Tar" Results**

<b>Brand</b>	<b>"Tar" mg/cig</b>	<b>"Nicotine" mg/cig</b>	<b>CO mg/cig</b>
Merit KFHP.....	7.8±0.2	0.60±0.01	9.8±0.2
Tareyton Long Lights 100FSP.....	8.1±0.2	0.68±0.01	8.8±0.3
Kool Lights KFMSP.....	8.2±0.2	0.69±0.02	9.0±0.2
Newport Lights KFMSP.....	8.3±0.3	0.75±0.02	9.1±0.3
Kent Golden Lights KFMSP.....	8.3±0.3	0.75±0.02	9.1±0.4
Vantage Menthol 100s 100FMSP.....	8.3±0.2	0.61±0.01	12.7±0.3
Dunhill International Superior Mild 100FHP.....	8.4±0.2	0.73±0.01	10.5±0.2
Lucky Strike Lights KFSP.....	8.4±0.3	0.68±0.02	10.2±0.3
Kent Golden Lights KFSP.....	8.5±0.2	0.74±0.02	9.6±0.3
Kool Lights 100's 100FMSP.....	8.5±0.2	0.73±0.01	10.0±0.3
Virginia Slims Lights 100FMHP.....	8.5±0.2	0.69±0.02	9.2±0.2
Newport Lights KFMHP.....	8.6±0.2	0.73±0.02	9.5±0.3
Vantage 100s 100FSP.....	8.8±0.2	0.63±0.02	12.5±0.3
Belair 100's 100FMSP.....	8.8±0.2	0.67±0.02	9.1±0.2
Kent Golden Lights KFHP.....	8.8±0.3	0.78±0.02	9.7±0.4
Camel Lights KFSP.....	8.8±0.2	0.65±0.01	11.3±0.3
Virginia Slims Lights 100FHP.....	8.8±0.2	0.70±0.02	9.3±0.3
Capri 100FMHP.....	8.9±0.2	0.73±0.02	6.0±0.2
Lucky Strike Lights 100's 100FSP.....	8.9±0.2	0.74±0.01	10.0±0.3
Falcon Lights 100's 100FMSP.....	8.9±0.2	0.73±0.02	11.0±0.3
More Lights 100s 100FMHP.....	9.0±0.3	0.69±0.03	10.2±0.3
Newport Lights 100's 100FMSP.....	9.0±0.3	0.83±0.02	9.5±0.4
Malibu Lights 100's 100FSP.....	9.1±0.2	0.75±0.02	10.6±0.4
Magna Lites KFSP.....	9.1±0.2	0.64±0.01	13.7±0.2
Parliament Lights KFSP.....	9.1±0.2	0.71±0.02	10.4±0.2
Capri 100FHP.....	9.2±0.2	0.78±0.02	6.4±0.2
Newport Lights 100's 100FMHP.....	9.2±0.3	0.84±0.02	9.9±0.3
Salem Lights 100's 100FMSP.....	9.3±0.3	0.74±0.02	11.1±0.4
Newport Stripers Slim Lights 100FMHP.....	9.3±0.2	0.76±0.02	11.4±0.2
Kent Golden Lights 100s 100FMSP.....	9.3±0.2	0.85±0.02	10.0±0.3
Old Gold Lights KFSP.....	9.3±0.2	0.81±0.02	10.9±0.3
Parliament Lights KFHP.....	9.5±0.2	0.72±0.02	10.3±0.4
Salem Slim Lights 100's 100FMHP.....	9.5±0.2	0.77±0.02	10.2±0.3
Kent Golden Lights 100s 100FSP.....	9.6±0.3	0.86±0.02	10.5±0.4
Century 25's Lights (25) KFSP.....	9.7±0.2	0.70±0.02	11.8±0.3
Winston Lights KFHP.....	9.7±0.2	0.63±0.01	11.7±0.3
Salem Lights KFMSP.....	9.8±0.2	0.72±0.02	12.6±0.2
Camel Lights KFHP.....	9.9±0.2	0.64±0.01	11.8±0.3
Winston Lights 100's 100FHP.....	9.9±0.2	0.72±0.02	11.8±0.3
Marlboro Lights KFMSP.....	9.9±0.2	0.77±0.01	10.4±0.3
More Lights 100s 100FHP.....	10.0±0.2	0.78±0.02	10.7±0.3
Players Lights 25's KFMSP.....	10.0±0.2	0.71±0.01	11.1±0.4
Vantage KFMSP.....	10.0±0.2	0.69±0.01	12.5±0.3
Players Lights 25's KFSP.....	10.0±0.2	0.72±0.02	11.1±0.2
Merit 100's 100FSP.....	10.0±0.2	0.80±0.02	11.8±0.3
Merit 100's 100FMSP.....	10.1±0.2	0.78±0.02	12.0±0.3
Marlboro Lights 100's 100FHMP.....	10.2±0.2	0.81±0.02	11.2±0.4

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted "Tar" Results**

Brand	"Tar" mg/cig	"Nicotine" mg/cig	CO mg/cig
Marlboro Lights KFMHP .....	10.2±0.2	0.78±0.02	11.2±0.3
Falcon Lights KFMSP .....	10.2±0.3	0.78±0.02	11.9±0.4
Kent Golden Lights 100s 100FHP .....	10.2±0.2	0.91±0.02	11.2±0.4
Malibu Lights KFSP .....	10.2±0.2	0.79±0.01	10.8±0.3
Pall Mall Red Lights KFSP .....	10.3±0.3	0.81±0.02	10.7±0.3
Pall Mall Lights 100's 100FSP .....	10.3±0.2	0.84±0.02	12.0±0.3
Ritz 100 100FHP .....	10.4±0.3	0.78±0.02	11.5±0.4
Dunhill Menthol Mild 100FMHP .....	10.4±0.2	0.96±0.02	12.5±0.2
Vantage KFSP .....	10.5±0.2	0.75±0.02	13.5±0.3
Benson & Hedges Lights 100's 100FMSP .....	10.7±0.2	0.81±0.02	12.0±0.2
Belair KFMSP .....	10.7±0.2	0.84±0.01	9.8±0.2
Winston Lights KFSP .....	10.7±0.2	0.75±0.01	13.2±0.3
Benson & Hedges Lights 100's 100FSP .....	10.7±0.2	0.83±0.02	13.0±0.3
Marlboro Lights 100's 100FHP .....	10.8±0.2	0.85±0.02	12.3±0.3
Marlboro Lights 100's 100FMSP .....	10.9±0.1	0.86±0.01	12.0±0.3
Marlboro Lights 100's 100FSP .....	11.0±0.2	0.85±0.02	13.0±0.4
Marlboro Lights KFHP .....	11.0±0.2	0.82±0.02	12.4±0.3
Silva Thins Menthol 100FMHP .....	11.1±0.2	0.90±0.01	11.7±0.3
Ritz 100 100FMHP .....	11.1±0.3	0.81±0.02	11.5±0.3
Pall Mall Red Lights 100's 100FSP .....	11.1±0.2	0.88±0.02	12.2±0.4
Falcon Lights KFSP .....	11.2±0.2	0.77±0.02	11.2±0.3
Marlboro Lights 25's KFSP .....	11.2±0.2	0.80±0.02	12.4±0.3
Benson & Hedges Multifilter KFSP .....	11.2±0.3	0.85±0.02	10.8±0.2
Marlboro Lights KFSP .....	11.2±0.2	0.83±0.02	12.2±0.3
Salem Lights 100's 100FMHP .....	11.3±0.2	0.86±0.02	11.6±0.2
Doral Lights 100's 100FSP .....	11.3±0.3	0.70±0.02	12.9±0.3
Kent KFHP .....	11.3±0.2	0.86±0.02	12.9±0.3
Viceroy Lights KFSP .....	11.3±0.3	0.88±0.02	13.1±0.3
Satin 100FMSP .....	11.4±0.3	0.97±0.02	13.3±0.4
Winston Lights 100's 100FSP .....	11.4±0.2	0.81±0.01	13.4±0.3
Satin 100FSP .....	11.4±0.3	0.97±0.02	13.1±0.4
Raleigh Lights KFSP .....	11.4±0.2	0.87±0.02	13.1±0.3
Camel Lights 100's 100FSP .....	11.4±0.2	0.81±0.01	15.0±0.3
Players 25's Lights 100's 100FMSP .....	11.4±0.2	0.81±0.01	13.7±0.3
Century 25's Menthol Lights 100's 100FMSP .....	11.5±0.2	0.84±0.01	13.2±0.3
Richland Lights (25) KFSP .....	11.5±0.2	0.89±0.02	12.7±0.3
Kool Milds KFMHP .....	11.6±0.3	0.88±0.02	11.3±0.3
Malibu Menthol 100's 100FMSP .....	11.6±0.2	0.94±0.02	12.5±0.3
Silva Thins 100FSP .....	11.7±0.2	0.98±0.02	10.0±0.2
Players KFHP .....	11.7±0.2	0.83±0.02	12.2±0.2
Doral Menthol Lights KFMSP .....	11.7±0.2	0.64±0.01	14.0±0.2
Richland 20's Lights KFSP .....	11.7±0.3	0.90±0.02	13.5±0.3
Lucky Strike Menthol 100's 100FMSP .....	11.8±0.1	0.96±0.02	12.3±0.2
Lucky Strike KFSP .....	11.8±0.3	0.89±0.02	12.6±0.3
Cambridge Lights 100's 100FMSP .....	11.9±0.2	0.86±0.01	14.6±0.4
Players KFMHP .....	11.9±0.2	0.82±0.01	12.3±0.2
Cambridge Lights KFMSP .....	11.9±0.2	0.84±0.02	12.1±0.3

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted "Tar" Results**

<b>Brand</b>	<b>"Tar" mg/cig</b>	<b>"Nicotine" mg/cig</b>	<b>CO mg/cig</b>
Lucky Strike Filters 100's 100FSP	11.9±0.2	0.96±0.02	12.7±0.2
Century 25's Lights 100's 100FSP	11.9±0.3	0.89±0.02	13.4±0.3
Viceroy Lights 100's 100FSP	11.9±0.2	0.92±0.02	14.1±0.3
Players 25's Lights 100's 100FSP	11.9±0.3	0.86±0.02	14.1±0.4
American Lights KFSP	11.9±0.2	0.91±0.02	12.9±0.3
Cambridge Lights 100's 100FSP	12.0±0.2	0.87±0.02	14.5±0.4
Parliament Lights 100's 100FSP	12.0±0.2	0.95±0.02	12.7±0.2
Kent KFSP	12.0±0.2	0.88±0.02	13.9±0.3
Kool Milds 100's 100FMSP	12.0±0.3	0.95±0.02	12.6±0.4
Doral Lights KFSP	12.1±0.3	0.67±0.02	14.5±0.4
Falcon Lights 100's 100FSP	12.1±0.2	0.85±0.02	14.8±0.4
Doral Menthol Lights 100's 100FMSP	12.1±0.2	0.90±0.02	14.2±0.4
Richland 20's Lights 100's 100FSP	12.1±0.3	0.73±0.01	13.7±0.3
Lucky Strike KFHP	12.1±0.2	0.92±0.02	12.8±0.4
Raleigh Lights 100's 100FSP	12.2±0.3	0.94±0.02	14.3±0.3
Newport Stripes 100FMHP	12.2±0.2	0.91±0.02	16.5±0.2
Silva Thins Filters 100FHP	12.2±0.2	0.97±0.02	12.5±0.3
More Lights 120s 120FMSP	12.2±0.4	0.99±0.03	19.6±0.5
Cambridge Lights KFSP	12.3±0.2	0.85±0.01	12.7±0.3
Silva Thins Menthol 100FMSP	12.3±0.3	1.05±0.02	10.5±0.3
Kool Milds KFMSP	12.3±0.3	0.93±0.02	13.1±0.3
Newport Stripes 100FHP	12.3±0.3	0.94±0.02	16.6±0.4
Old Gold Lights 100s 100FSP	12.3±0.2	0.91±0.02	17.0±0.3
Richland Lights (25) 100's 100FSP	12.4±0.2	0.94±0.02	14.0±0.2
L & M 30's Lights 100's 100FSP	12.6±0.3	1.06±0.02	10.7±0.3
Eve Slim Lights 100's 100FMHP	12.6±0.3	1.00±0.02	10.8±0.3
Eve Slim Lights 100's 100FHP	12.8±0.2	1.03±0.02	11.0±0.2
More Lights 120s 120FSP	12.9±0.2	0.98±0.01	20.2±0.5
Eve Lights 120's 120FHP	13.0±0.4	1.12±0.03	11.6±0.5
Pall Mall Light 100's Low Tar 100FMSP	13.3±0.2	1.08±0.02	13.1±0.3
American Lights 100's 100FSP	13.3±0.2	1.08±0.01	13.9±0.2
Lark Lights KFSP	13.4±0.3	1.03±0.02	13.3±0.3
Eve Lights 120's 120FMHP	13.5±0.2	1.17±0.02	12.0±0.3
Kent 100s 100FSP	13.6±0.3	1.02±0.02	14.7±0.4
Pall Mall Red Filters KFSP	13.6±0.3	1.02±0.02	12.6±0.3
Rothmans Special Mild KFHP	13.6±0.2	1.03±0.02	15.5±0.4
L & M KFSP	13.7±0.2	1.08±0.02	12.9±0.3
Pall Mall Red Filters 100's 100FSP	13.8±0.3	1.07±0.02	14.0±0.2
Players 100's 100FHP	13.9±0.2	0.98±0.02	12.9±0.3
Lark Light 100's 100FSP	13.9±0.3	1.15±0.03	14.5±0.5
L & M Super 100 100FSP	13.9±0.2	1.12±0.02	14.2±0.3
Magna KFSP	13.9±0.2	0.91±0.02	14.9±0.2
Malibu 100's 100FSP	13.9±0.3	1.10±0.02	13.4±0.3
Kent 100s 100FMSP	14.0±0.2	1.04±0.01	14.4±0.3
Players 100's 100FMHP	14.0±0.2	0.98±0.02	12.7±0.3
Magna KFHP	14.1±0.3	0.90±0.01	16.3±0.4
Harley Davidson KFSP	14.1±0.3	0.98±0.02	16.3±0.4

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted "Tar" Results**

<b>Brand</b>	<b>"Tar" mg/cig</b>	<b>"Nicotine" mg/cig</b>	<b>CO mg/cig</b>
Tareyton 100's 100FSP .....	14.1±0.2	1.02±0.02	16.8±0.4
Dunhill Menthol 100FMHP .....	14.2±0.3	1.19±0.02	17.0±0.4
Lark KFSP .....	14.3±0.3	1.11±0.03	13.3±0.3
Tareyton KFSP .....	14.3±0.3	0.98±0.02	15.9±0.3
Saratoga 120's 120FHP .....	14.5±0.2	1.07±0.02	14.8±0.3
Saratoga 120's 120FMHP .....	14.7±0.2	1.07±0.02	14.8±0.4
Lark 100FSP .....	14.7±0.3	1.22±0.02	14.0±0.2
Doral Full Flavor 100's 100FSP .....	14.7±0.2	0.84±0.01	17.2±0.3
*Virginia Slims Lights 120's 120FHP .....	14.7±0.3	1.09±0.02	15.2±0.3
St. Moritz Filter 100s 100FSP .....	14.8±0.2	1.08±0.02	15.5±0.2
*Virginia Slims Lights 120's 120FMHP .....	14.9±0.2	1.08±0.01	14.9±0.2
St. Moritz Menthol 100FMSP .....	14.9±0.3	0.96±0.01	17.1±0.4
Virginia Slims 100FMSP .....	15.1±0.3	1.06±0.03	13.9±0.3
Dunhill International 100FHP .....	15.2±0.3	1.39±0.03	17.6±0.3
Virginia Slims 100FSP .....	15.3±0.2	1.07±0.02	13.8±0.3
Century 25's (25) KFSP .....	15.3±0.3	0.99±0.02	17.8±0.3
Viceroy KFSP .....	15.3±0.3	0.97±0.02	14.5±0.3
Benson & Hedges KFHP .....	15.4±0.2	1.26±0.02	12.6±0.3
Raleigh KFSP .....	15.5±0.4	0.97±0.03	14.7±0.3
Raleigh 100's 100FSP .....	15.5±0.3	0.99±0.02	16.0±0.3
Camel Filters KFSP .....	15.6±0.3	1.01±0.02	15.4±0.2
Newport KFMHP .....	15.7±0.2	1.17±0.02	16.5±0.3
Craven "A" KFHP .....	15.8±0.4	1.15±0.02	16.3±0.4
Viceroy Super Long 100's 100FSP .....	15.9±0.3	1.14±0.02	15.1±0.3
Salem KFMSP .....	15.9±0.3	1.04±0.02	16.7±0.3
Richland 100's (25) 100FMSP .....	16.0±0.3	1.16±0.02	16.3±0.4
Kool KFMHP .....	16.2±0.4	1.12±0.03	16.4±0.4
Richland (25) KFMSP .....	16.2±0.3	1.09±0.02	15.6±0.3
Richland 20's KFSP .....	16.3±0.3	1.13±0.02	16.0±0.3
Richland 20's KFMSP .....	16.4±0.4	1.05±0.02	16.1±0.3
Malibu Filters KFSP .....	16.4±0.3	1.18±0.03	13.6±0.3
Marlboro 100's Red 100FHP .....	16.4±0.3	1.19±0.02	16.3±0.4
More 120s 120FSP .....	16.5±0.4	1.19±0.02	21.5±0.4
Marlboro 100's Red 100FSP .....	16.5±0.2	1.19±0.02	17.0±0.2
Richland 20's 100's 100FSP .....	16.6±0.3	1.23±0.02	17.3±0.4
More 120s 120FMSP .....	16.6±0.3	1.28±0.03	22.0±0.5
Richland (25) KFSP .....	16.6±0.3	1.18±0.02	15.8±0.2
Kool Super Longs 100's 100FMSP .....	16.6±0.3	1.25±0.02	17.0±0.3
Richland 20's Menthol 100's 100FMSP .....	16.6±0.3	1.15±0.02	17.1±0.3
Philip Morris International 100FHP .....	16.6±0.3	1.15±0.02	15.6±0.4
Winston KFHP .....	16.6±0.2	1.06±0.02	16.9±0.3
Kool KFMSP .....	16.7±0.3	1.14±0.02	16.8±0.3
Camel Filters KFHP .....	16.7±0.3	1.06±0.02	16.6±0.3
Salem 100's 100FMSP .....	16.8±0.2	1.19±0.02	16.1±0.3
Old Gold Filters KFSP .....	16.8±0.4	1.24±0.02	18.1±0.3

\*Retested brand

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted "Tar" Results**

Brand	"Tar" mg/cig	"Nicotine" mg/cig	CO mg/cig
Philip Morris International 100FMHP.....	16.8±0.3	1.08±0.02	16.2±0.4
Winston 100's 100FSP .....	16.8±0.3	1.06±0.02	18.6±0.3
Marlboro KFHP .....	16.8±0.2	1.14±0.02	15.2±0.3
Marlboro 100's 100FHP .....	16.8±0.3	1.22±0.03	16.9±0.6
Pall Mall 100's 100FSP .....	16.8±0.2	1.28±0.02	17.1±0.3
Richland 100's (25) 100FSP .....	16.9±0.2	1.28±0.02	17.3±0.4
Marlboro 100's 100FSP .....	16.9±0.3	1.22±0.02	16.5±0.4
Winston KFSP .....	16.9±0.2	1.13±0.02	16.3±0.2
Cambridge Full Flavor KFSP .....	17.0±0.2	1.09±0.01	16.1±0.3
*Benson & Hedges 100's 100FMSP .....	17.0±0.4	1.20±0.02	16.4±0.3
*Alpine KFMSP .....	17.0±0.3	1.14±0.02	16.5±0.2
*Marlboro KFMSP .....	17.0±0.3	1.18±0.01	15.3±0.2
Max 120s 120FSP .....	17.1±0.3	1.34±0.03	17.7±0.4
Newport KFMSP .....	17.1±0.3	1.26±0.02	18.3±0.5
Malibu Menthol KFMSP .....	17.1±0.3	1.24±0.02	14.8±0.2
Newport 25's KFMSP .....	17.1±0.4	1.28±0.02	18.2±0.4
Marlboro 25's KFSP .....	17.2±0.4	1.13±0.02	15.9±0.3
Max 120s 120FMSP .....	17.2±0.2	1.38±0.03	17.0±0.5
Cambridge Full Flavor 100's 100FSP .....	17.2±0.2	1.17±0.02	16.0±0.3
*Benson & Hedges 100's 100FHP .....	17.2±0.3	1.20±0.03	17.0±0.4
*Benson & Hedges 100's 100FSP .....	17.2±0.4	1.22±0.02	16.4±0.4
*Benson & Hedges 100's 100FMHP .....	17.2±0.3	1.22±0.01	17.2±0.3
Marlboro KFSP .....	17.4±0.2	1.17±0.02	16.9±0.4
Doral Full Flavor KFSP .....	17.4±0.2	0.92±0.01	19.6±0.4
Century 25's 100's 100FSP .....	17.5±0.3	1.13±0.02	20.9±0.5
Camel Filters 100's 100FSP .....	17.5±0.2	1.06±0.01	18.7±0.3
Tall 120s 120FMSP .....	18.0±0.3	1.57±0.03	16.5±0.5
Craven "A" Filter Standard Size RFHP .....	18.6±0.4	1.51±0.03	13.6±0.3
Newport 100's 100FMHP.....	19.2±0.2	1.46±0.02	19.4±0.4
Spring 100's 100FMSP .....	19.3±0.2	1.49±0.03	19.0±0.2
Newport 100's 100FMSP .....	19.3±0.3	1.47±0.03	19.4±0.4
Rothmans KFHP .....	19.4±0.4	1.34±0.02	22.5±0.7
Newport 25's 100FMSP .....	19.5±0.3	1.48±0.02	19.8±0.3
Old Gold Filter 100's 100FSP .....	19.7±0.3	1.50±0.03	19.6±0.4
Chesterfield RNFSP .....	20.0±0.5	1.30±0.03	13.3±0.4
Tall 120s 120FSP .....	20.4±0.3	1.64±0.03	20.2±0.4
Kool RNFMSp .....	21.5±0.8	1.36±0.03	14.5±0.2
Camel RNFSP .....	22.0±0.3	1.39±0.02	14.2±0.4
English Ovals KNFHP .....	23.8±0.6	1.87±0.04	15.6±0.5
Raleigh KNFSP .....	23.8±0.5	1.40±0.03	16.6±0.4
Chesterfield KNFSP .....	24.2±0.5	1.65±0.04	15.3±0.5
Lucky Strike RNFSP .....	24.4±0.5	1.52±0.02	16.5±0.3
Pall Mall 25's KNFSP .....	24.7±0.3	1.64±0.03	16.5±0.3
Pall Mall KNFSP .....	24.9±0.3	1.64±0.02	16.6±0.4
Herbert Tareyton KNFSP.....	25.1±0.9	1.58±0.03	17.8±0.4

\*Retested brand

**Tobacco Institute Testing Laboratory  
Market Sample 31  
Sorted "Tar" Results**

<b>Brand</b>	<b>"Tar" mg/cig</b>	<b>"Nicotine" mg/cig</b>	<b>CO mg/cig</b>
Players RNFHP .....	25.2±0.4	1.74±0.03	15.9±0.4
Philip Morris Commander KNFSP .....	26.3±0.5	1.61±0.03	16.2±0.5
Old Gold Straights KNFSP .....	26.9±0.6	1.89±0.05	18.7±0.5

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted "Nicotine" Results**

Brand	"Nicotine" mg/cig	"Tar" mg/cig	CO mg/cig
Carlton KFHP .....	<0.05	<0.5	<0.5
Now KFHP .....	<0.05	<0.5	<0.5
Now 100s 100FHP .....	<0.05	<0.5	<0.5
Carlton KFMSP .....	0.09±0.01	0.6±0.1	1.4±0.1
Carlton 100's 100FMHP .....	0.10±0.01	0.6±0.1	1.0±0.1
Carlton 100's 100FHP .....	0.10±0.01	0.7±0.1	1.1±0.1
Now KFMSP .....	0.13±0.01	1.1±0.1	2.3±0.1
Now KFSP .....	0.14±0.01	1.0±0.1	2.3±0.1
Carlton KFSP .....	0.15±0.01	1.3±0.1	2.4±0.1
Now 100s 100FSP .....	0.21±0.01	1.9±0.1	3.1±0.2
Kool Ultra KFMSP .....	0.21±0.02	2.2±0.2	2.7±0.2
Now 100s 100FMSP .....	0.26±0.01	2.5±0.1	4.3±0.2
Triumph KFSP .....	0.32±0.02	3.1±0.1	3.8±0.2
Triumph KFMSP .....	0.34±0.02	3.5±0.2	4.3±0.2
Carlton 100's 100FSP .....	0.35±0.01	3.4±0.1	4.6±0.2
Kent III KFSP .....	0.35±0.02	3.4±0.2	4.3±0.2
Cambridge Ultra Low Tar 100's 100FSP .....	0.41±0.01	4.7±0.2	6.6±0.3
Merit Ultra Lights KFMSP .....	0.42±0.01	4.5±0.1	5.9±0.2
Carlton 100's 100FMSP .....	0.42±0.01	4.5±0.1	6.4±0.2
Salem Ultra Lights KFMSP .....	0.43±0.01	4.9±0.1	7.7±0.2
Merit Ultra Lights KFSP .....	0.43±0.01	4.4±0.2	5.5±0.2
Tareyton Lights KFSP .....	0.44±0.01	5.2±0.2	6.0±0.2
Bright 100s 100FMSP .....	0.44±0.01	6.0±0.1	10.3±0.3
Benson & Hedges Deluxe Ultra Lights 100's 100FHP .....	0.44±0.02	5.0±0.2	6.2±0.3
Kent III 100s 100FSP .....	0.45±0.01	4.7±0.2	6.6±0.3
Kool Ultra 100's 100FMSP .....	0.45±0.02	5.0±0.3	5.2±0.3
Salem Ultra Lights 100's 100FMSP .....	0.45±0.01	5.1±0.1	8.0±0.2
Winston Ultra Lights KFSP .....	0.46±0.01	5.5±0.2	8.5±0.2
True KFMSP .....	0.46±0.02	4.9±0.3	6.1±0.4
Benson & Hedges Deluxe Ultra Lights 100's 100FMHP .....	0.47±0.01	5.2±0.1	6.2±0.2
Winston Ultra Lights 100's 100FSP .....	0.47±0.02	5.3±0.2	9.0±0.3
Vantage Ultra Lights KFSP .....	0.47±0.01	5.5±0.1	8.0±0.2
True KFSP .....	0.48±0.02	5.1±0.2	6.4±0.3
Doral Ultra Lights 100's 100FSP .....	0.48±0.02	6.7±0.3	11.7±0.5
Triumph 100s 100FSP .....	0.50±0.02	5.3±0.3	7.4±0.4
Vantage Ultra Lights 100s 100FSP .....	0.50±0.01	5.8±0.1	9.5±0.2
Kent III 100s 100FHP .....	0.50±0.03	5.0±0.2	6.8±0.3
Merit Ultra Lights 100's 100FSP .....	0.50±0.01	5.3±0.1	7.4±0.2
Triumph 100s 100FMSP .....	0.52±0.01	5.4±0.2	7.5±0.2
Merit Ultra Lights 100's 100FMSP .....	0.53±0.02	6.0±0.2	8.2±0.3
Merit KFMSP .....	0.58±0.01	7.7±0.2	10.0±0.3
Merit KFSP .....	0.59±0.01	7.6±0.2	9.8±0.3
Merit KFHP .....	0.60±0.01	7.8±0.2	9.8±0.2
Vantage Menthol 100s 100FMSP .....	0.61±0.01	8.3±0.2	12.7±0.3
True 100's 100FMSP .....	0.61±0.03	6.7±0.4	7.3±0.5
True 100's 100FSP .....	0.61±0.02	6.7±0.3	7.4±0.4
Carlton 120's 120FMSP .....	0.62±0.03	6.2±0.2	5.5±0.2

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted "Nicotine" Results**

Brand	"Nicotine" mg/cig	"Tar" mg/cig	CO mg/cig
Carlton 120's 120FSP.....	0.62±0.02	6.5±0.2	5.6±0.2
Vantage 100s 100FSP .....	0.63±0.02	8.8±0.2	12.5±0.3
Winston Lights KFHP .....	0.63±0.01	9.7±0.2	11.7±0.3
Doral Menthol Lights KFMSP.....	0.64±0.01	11.7±0.2	14.0±0.2
Magna Lites KFSP .....	0.64±0.01	9.1±0.2	13.7±0.2
Camel Lights KFHP .....	0.64±0.01	9.9±0.2	11.8±0.3
Camel Lights KFSP .....	0.65±0.01	8.8±0.2	11.3±0.3
Belair 100's 100FMSP.....	0.67±0.02	8.8±0.2	9.1±0.2
Doral Lights KFSP .....	0.67±0.02	12.1±0.3	14.5±0.4
Tareyton Long Lights 100FSP .....	0.68±0.01	8.1±0.2	8.8±0.3
Lucky Strike Lights KFSP .....	0.68±0.02	8.4±0.3	10.2±0.3
Virginia Slims Lights 100FMHP .....	0.69±0.02	8.5±0.2	9.2±0.2
Kool Lights KFMSP .....	0.69±0.02	8.2±0.2	9.0±0.2
Vantage KFMSP .....	0.69±0.01	10.0±0.2	12.5±0.3
More Lights 100s 100FMHP .....	0.69±0.03	9.0±0.3	10.2±0.3
Century 25's Lights (25) KFSP .....	0.70±0.02	9.7±0.2	11.8±0.3
Virginia Slims Lights 100FHP .....	0.70±0.02	8.8±0.2	9.3±0.3
Doral Lights 100's 100FSP .....	0.70±0.02	11.3±0.3	12.9±0.3
Parliament Lights KFSP.....	0.71±0.02	9.1±0.2	10.4±0.2
Players Lights 25's KFMSP.....	0.71±0.01	10.0±0.2	11.1±0.4
Parliament Lights KFHP .....	0.72±0.02	9.5±0.2	10.3±0.4
Players Lights 25's KFSP.....	0.72±0.02	10.0±0.2	11.1±0.2
Salem Lights KFMSP .....	0.72±0.02	9.8±0.2	12.6±0.2
Winston Lights 100's 100FHP .....	0.72±0.02	9.9±0.2	11.8±0.3
Falcon Lights 100's 100FMSP .....	0.73±0.02	8.9±0.2	11.0±0.3
Capri 100FMHP .....	0.73±0.02	8.9±0.2	6.0±0.2
Kool Lights 100's 100FMSP .....	0.73±0.01	8.5±0.2	10.0±0.3
Doral Menthol Lights 100's 100FMSP .....	0.73±0.01	12.1±0.3	13.7±0.3
Dunhill International Superior Mild 100FHP .....	0.73±0.01	8.4±0.2	10.5±0.2
Newport Lights KFMHP .....	0.73±0.02	8.6±0.2	9.5±0.3
Salem Lights 100's 100FMSP.....	0.74±0.02	9.3±0.3	11.1±0.4
Lucky Strike Lights 100's 100FSP .....	0.74±0.01	8.9±0.2	10.0±0.3
Kent Golden Lights KFSP .....	0.74±0.02	8.5±0.2	9.6±0.3
Newport Lights KFMSP .....	0.75±0.02	8.3±0.3	9.1±0.3
Winston Lights KFSP .....	0.75±0.01	10.7±0.2	13.2±0.3
Kent Golden Lights KFMSP .....	0.75±0.02	8.3±0.3	9.1±0.4
Vantage KFSP .....	0.75±0.02	10.5±0.2	13.5±0.3
Malibu Lights 100's 100FSP .....	0.75±0.02	9.1±0.2	10.6±0.4
Newport Stripes Slim Lights 100FMHP .....	0.76±0.02	9.3±0.2	11.4±0.2
Salem Slim Lights 100's 100FMHP .....	0.77±0.02	9.5±0.2	10.2±0.3
Marlboro Lights KFMSP .....	0.77±0.01	9.9±0.2	10.4±0.3
Falcon Lights KFSP .....	0.77±0.02	11.2±0.2	11.2±0.3
Merit 100's 100FMSP .....	0.78±0.02	10.1±0.2	12.0±0.3
Ritz 100 100FHP .....	0.78±0.02	10.4±0.3	11.5±0.4
Falcon Lights KFMSP .....	0.78±0.02	10.2±0.3	11.9±0.4
Capri 100FHP .....	0.78±0.02	9.2±0.2	6.4±0.2
Marlboro Lights KFMHP .....	0.78±0.02	10.2±0.2	11.2±0.3

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted "Nicotine" Results**

Brand	"Nicotine" mg/cig	"Tar" mg/cig	CO mg/cig
More Lights 100s 100FHP .....	0.78±0.02	10.0±0.2	10.7±0.3
Kent Golden Lights KFHP .....	0.78±0.02	8.8±0.3	9.7±0.4
Malibu Lights KFSP .....	0.79±0.01	10.2±0.2	10.8±0.3
Marlboro Lights 25's KFSP .....	0.80±0.02	11.2±0.2	12.4±0.3
Merit 100's 100FSP .....	0.80±0.02	10.0±0.2	11.8±0.3
L & M Long Lights 100FSP.....	0.80±0.02	7.8±0.2	6.3±0.2
Camel Lights 100's 100FSP .....	0.81±0.01	11.4±0.2	15.0±0.3
Old Gold Lights KFSP .....	0.81±0.02	9.3±0.2	10.9±0.3
Winston Lights 100's 100FSP.....	0.81±0.01	11.4±0.2	13.4±0.3
Benson & Hedges Lights 100's 100FMSP .....	0.81±0.02	10.7±0.2	12.0±0.2
Pall Mall Red Lights KFSP.....	0.81±0.02	10.3±0.3	10.7±0.3
Ritz 100 100FMHP .....	0.81±0.02	11.1±0.3	11.5±0.3
Marlboro Lights 100's 100FHMP .....	0.81±0.02	10.2±0.2	11.2±0.4
Players 25's Lights 100's 100FMSP.....	0.81±0.01	11.4±0.2	13.7±0.3
Players KFMHP .....	0.82±0.01	11.9±0.2	12.3±0.2
Marlboro Lights KFHP .....	0.82±0.02	11.0±0.2	12.4±0.3
Marlboro Lights KFSP .....	0.83±0.02	11.2±0.2	12.2±0.3
Benson & Hedges Lights 100's 100FSP .....	0.83±0.02	10.7±0.2	13.0±0.3
Newport Lights 100's 100FMSP .....	0.83±0.02	9.0±0.3	9.5±0.4
Players KFHP .....	0.83±0.02	11.7±0.2	12.2±0.2
Cambridge Lights KFMSP.....	0.84±0.02	11.9±0.2	12.1±0.3
Doral Full Flavor 100's 100FSP .....	0.84±0.01	14.8±0.2	17.2±0.3
Century 25's Menthol Lights 100's 100FMSP.....	0.84±0.01	11.5±0.2	13.2±0.3
Newport Lights 100's 100FMHP .....	0.84±0.02	9.2±0.3	9.9±0.3
Belair KFMSP .....	0.84±0.01	10.7±0.2	9.8±0.2
Pall Mall Lights 100's 100FSP .....	0.84±0.02	10.3±0.2	12.0±0.3
Cambridge Lights KFSP .....	0.85±0.01	12.3±0.2	12.7±0.3
Marlboro Lights 100's 100FHP .....	0.85±0.02	10.8±0.2	12.3±0.3
Marlboro Lights 100's 100FSP .....	0.85±0.02	11.0±0.2	13.0±0.4
Kent Golden Lights 100s 100FMSP.....	0.85±0.02	9.3±0.2	10.0±0.3
Benson & Hedges Multifilter KFSP .....	0.85±0.02	11.2±0.3	10.8±0.2
Falcon Lights 100's 100FSP .....	0.85±0.02	12.1±0.2	14.8±0.4
Marlboro Lights 100's 100FMSP .....	0.86±0.01	10.9±0.1	12.0±0.3
Kent KFHP .....	0.86±0.02	11.3±0.2	12.9±0.3
Cambridge Lights 100's 100FMSP .....	0.86±0.01	11.9±0.2	14.6±0.4
Salem Lights 100's 100FMHP .....	0.86±0.02	11.3±0.2	11.6±0.2
Players 25's Lights 100's 100FSP.....	0.86±0.02	11.9±0.3	14.1±0.4
Kent Golden Lights 100s 100FSP.....	0.86±0.02	9.6±0.3	10.5±0.4
Cambridge Lights 100's 100FSP .....	0.87±0.02	12.0±0.2	14.5±0.4
Raleigh Lights KFSP .....	0.87±0.02	11.4±0.2	13.1±0.3
Pall Mall Red Lights 100's 100FSP .....	0.88±0.02	11.1±0.2	12.2±0.4
Viceroy Lights KFSP .....	0.88±0.02	11.3±0.3	13.1±0.3
Kool Milds KFMHP .....	0.88±0.02	11.6±0.3	11.3±0.3
Kent KFSP .....	0.88±0.02	12.0±0.2	13.9±0.3
Century 25's Lights 100's 100FSP .....	0.89±0.02	11.9±0.3	13.4±0.3
Richland Lights (25) KFSP .....	0.89±0.02	11.5±0.2	12.7±0.3
Lucky Strike KFSP .....	0.89±0.02	11.8±0.3	12.6±0.3

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted "Nicotine" Results**

<b>Brand</b>	<b>"Nicotine" mg/cig</b>	<b>"Tar" mg/cig</b>	<b>CO mg/cig</b>
Richland 20's Lights 100's 100FSP.....	0.90±0.02	12.1±0.2	14.2±0.4
Magna KFHP .....	0.90±0.01	14.1±0.3	16.3±0.4
Richland 20's Lights KFSP .....	0.90±0.02	11.7±0.3	13.5±0.3
Silva Thins Menthol 100FMHP.....	0.90±0.01	11.1±0.2	11.7±0.3
Old Gold Lights 100s 100FSP.....	0.91±0.02	12.3±0.2	17.0±0.3
American Lights KFSP.....	0.91±0.02	11.9±0.2	12.9±0.3
Newport Stripes 100FMHP .....	0.91±0.02	12.2±0.2	16.5±0.2
Magna KFSP.....	0.91±0.02	13.9±0.2	14.9±0.2
Kent Golden Lights 100s 100FHP .....	0.91±0.02	10.2±0.2	11.2±0.4
Viceroy Lights 100's 100FSP.....	0.92±0.02	11.9±0.2	14.1±0.3
Doral Full Flavor KFSP .....	0.92±0.01	17.4±0.2	19.6±0.4
Lucky Strike KFHP .....	0.92±0.02	12.1±0.2	12.8±0.4
Kool Milds KFMSP .....	0.93±0.02	12.3±0.3	13.1±0.3
Raleigh Lights 100's 100FSP.....	0.94±0.02	12.2±0.3	14.3±0.3
Malibu Menthol 100's 100FMSP.....	0.94±0.02	11.6±0.2	12.5±0.3
Newport Stripes 100FHP .....	0.94±0.02	12.3±0.3	16.6±0.4
Richland Lights (25) 100's 100FSP .....	0.94±0.02	12.4±0.2	14.0±0.2
Parliament Lights 100's 100FSP .....	0.95±0.02	12.0±0.2	12.7±0.2
Kool Milds 100's 100FMSP.....	0.95±0.02	12.0±0.3	12.6±0.4
St. Moritz Menthol 100FMSP .....	0.96±0.01	14.9±0.3	17.1±0.4
Dunhill Menthol Mild 100FMHP.....	0.96±0.02	10.4±0.2	12.5±0.2
Lucky Strike Menthol 100's 100FMSP .....	0.96±0.02	11.8±0.1	12.3±0.2
Lucky Strike Filters 100's 100FSP.....	0.96±0.02	11.9±0.2	12.7±0.2
Raleigh KFSP .....	0.97±0.03	15.5±0.4	14.7±0.3
Viceroy KFSP .....	0.97±0.02	15.3±0.3	14.5±0.3
Satin 100FSP .....	0.97±0.02	11.4±0.3	13.1±0.4
Silva Thins Filters 100FHP .....	0.97±0.02	12.2±0.2	12.5±0.3
Satin 100FMSP .....	0.97±0.02	11.4±0.3	13.3±0.4
Silva Thins 100FSP .....	0.98±0.02	11.7±0.2	10.0±0.2
More Lights 120s 120FSP .....	0.98±0.01	12.9±0.2	20.2±0.5
Tareyton KFSP .....	0.98±0.02	14.3±0.3	15.9±0.3
Players 100's 100FMHP .....	0.98±0.02	14.0±0.2	12.7±0.3
Harley Davidson KFSP .....	0.98±0.02	14.1±0.3	16.3±0.4
Players 100's 100FHP .....	0.98±0.02	13.9±0.2	12.9±0.3
Century 25's (25) KFSP.....	0.99±0.02	15.3±0.3	17.8±0.3
More Lights 120s 120FMSP.....	0.99±0.03	12.2±0.4	19.6±0.5
Raleigh 100's 100FSP .....	0.99±0.02	15.5±0.3	16.0±0.3
Eve Slim Lights 100's 100FMHP .....	1.00±0.02	12.6±0.3	10.8±0.3
Camel Filters KFSP .....	1.01±0.02	15.6±0.3	15.4±0.2
Pall Mall Red Filters KFSP .....	1.02±0.02	13.6±0.3	12.6±0.3
Kent 100s 100FSP .....	1.02±0.02	13.6±0.3	14.7±0.4
Tareyton 100's 100FSP .....	1.02±0.02	14.1±0.2	16.8±0.4
Rothmans Special Mild KFHP.....	1.03±0.02	13.6±0.2	15.5±0.4
Eve Slim Lights 100's 100FHP .....	1.03±0.02	12.8±0.2	11.0±0.2
Lark Lights KFSP.....	1.03±0.02	13.4±0.3	13.3±0.3
Salem KFMSP .....	1.04±0.02	15.9±0.3	16.7±0.3
Kent 100s 100FMSP.....	1.04±0.01	14.0±0.2	14.4±0.3

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted "Nicotine" Results**

Brand	"Nicotine" mg/cig	"Tar" mg/cig	CO mg/cig
Richland 20's KFMSP .....	1.05±0.02	16.4±0.4	16.1±0.3
Silva Thins Menthol 100FMSP .....	1.05±0.02	12.3±0.3	10.5±0.3
Camel Filters 100's 100FSP .....	1.06±0.01	17.5±0.2	18.7±0.3
Winston 100's 100FSP .....	1.06±0.02	16.9±0.2	18.6±0.3
Virginia Slims 100FMSP .....	1.06±0.03	15.1±0.3	13.9±0.3
Camel Filters KFHP .....	1.06±0.02	16.8±0.2	16.6±0.3
Winston KFHP .....	1.06±0.02	16.8±0.3	16.9±0.3
L & M 30's Lights 100's 100FSP .....	1.06±0.02	12.6±0.3	10.7±0.3
Saratoga 120's 120FMHP .....	1.07±0.02	14.7±0.3	14.8±0.4
Saratoga 120's 120FHP .....	1.07±0.02	14.7±0.2	14.8±0.3
Virginia Slims 100FSP .....	1.07±0.02	15.3±0.2	13.8±0.3
Pall Mall Red Filters 100's 100FSP .....	1.07±0.02	13.8±0.3	14.0±0.2
American Lights 100's 100FSP .....	1.08±0.01	13.3±0.2	13.9±0.2
*Virginia Slims Lights 120's 120FMHP .....	1.08±0.01	14.9±0.2	14.9±0.2
L & M KFSP .....	1.08±0.02	13.7±0.2	12.9±0.3
St. Moritz Filter 100s 100FSP .....	1.08±0.02	14.9±0.2	15.5±0.2
Philip Morris International 100FMHP .....	1.08±0.02	16.9±0.2	16.2±0.4
Pall Mall Light 100's Low Tar 100FMSP .....	1.08±0.02	13.3±0.2	13.1±0.3
Richland (25) KFMSP .....	1.09±0.02	16.2±0.3	15.6±0.3
Cambridge Full Flavor KFSP .....	1.09±0.01	17.1±0.3	16.1±0.3
*Virginia Slims Lights 120's 120FHP .....	1.09±0.02	14.8±0.2	15.2±0.3
Malibu 100's 100FSP .....	1.10±0.02	13.9±0.3	13.4±0.3
Lark KFSP .....	1.11±0.03	14.3±0.3	13.3±0.3
L & M Super 100 100FSP .....	1.12±0.02	13.9±0.2	14.2±0.3
Kool KFMHP .....	1.12±0.03	16.2±0.4	16.4±0.4
Eve Lights 120's 120FHP .....	1.12±0.03	13.0±0.4	11.6±0.5
Richland 20's KFSP .....	1.13±0.02	16.3±0.3	16.0±0.3
Marlboro 25's KFSP .....	1.13±0.02	17.2±0.3	15.9±0.3
Winston KFSP .....	1.13±0.02	17.1±0.3	16.3±0.2
Century 25's 100's 100FSP .....	1.13±0.02	17.5±0.3	20.9±0.5
*Alpine KFMSP .....	1.14±0.02	17.1±0.2	16.5±0.2
Viceroy Super Long 100's 100FSP .....	1.14±0.02	15.9±0.3	15.1±0.3
Marlboro KFHP .....	1.14±0.02	17.0±0.2	15.2±0.3
Kool KFMSP .....	1.14±0.02	16.8±0.3	16.8±0.3
Philip Morris International 100FHP .....	1.15±0.02	16.8±0.4	15.6±0.4
Lark Light 100's 100FSP .....	1.15±0.03	13.9±0.3	14.5±0.5
Richland 20's Menthol 100's 100FMSP .....	1.15±0.02	16.7±0.3	17.1±0.3
Craven "A" KFHP .....	1.15±0.02	15.8±0.4	16.3±0.4
Richland 100's (25) 100FMSP .....	1.16±0.02	16.0±0.3	16.3±0.4
Eve Lights 120's 120FMHP .....	1.17±0.02	13.5±0.2	12.0±0.3
Cambridge Full Flavor 100's 100FSP .....	1.17±0.02	17.2±0.3	16.0±0.3
Marlboro KFSP .....	1.17±0.02	17.4±0.2	16.9±0.4
Newport KFMHP .....	1.17±0.02	15.7±0.2	16.5±0.3
Richland (25) KFSP .....	1.18±0.02	16.6±0.2	15.8±0.2
Malibu Filters KFSP .....	1.18±0.03	16.4±0.3	13.6±0.3

\*Retested brand

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted "Nicotine" Results**

Brand	"Nicotine" mg/cig	"Tar" mg/cig	CO mg/cig
*Marlboro KFMSP .....	1.18±0.01	17.1±0.3	15.3±0.2
Marlboro 100's Red 100FSP .....	1.19±0.02	16.5±0.2	17.0±0.2
Dunhill Menthol 100FMHP .....	1.19±0.02	14.2±0.3	17.0±0.4
Marlboro 100's Red 100FHP .....	1.19±0.02	16.4±0.3	16.3±0.4
Salem 100's 100FMSP .....	1.19±0.02	16.8±0.3	16.1±0.3
More 120s 120FSP .....	1.19±0.02	16.5±0.4	21.5±0.4
*Benson & Hedges 100's 100FMSP .....	1.20±0.02	17.1±0.2	16.4±0.3
*Benson & Hedges 100's 100FHP .....	1.20±0.03	17.3±0.2	17.0±0.4
Marlboro 100's 100FSP .....	1.22±0.02	17.1±0.3	16.5±0.4
*Benson & Hedges 100's 100FMHP .....	1.22±0.01	17.4±0.2	17.2±0.3
Lark 100FSP .....	1.22±0.02	14.7±0.2	14.0±0.2
Marlboro 100's 100FHP .....	1.22±0.03	17.0±0.4	16.9±0.6
*Benson & Hedges 100's 100FSP .....	1.22±0.02	17.3±0.2	16.4±0.4
Richland 20's 100's 100FSP .....	1.23±0.02	16.6±0.3	17.3±0.4
Malibu Menthol KFMSP .....	1.24±0.02	17.2±0.2	14.8±0.2
Old Gold Filters KFSP .....	1.24±0.02	16.8±0.2	18.1±0.3
Kool Super Longs 100's 100FMSP .....	1.25±0.02	16.7±0.3	17.0±0.3
Newport KFMSP .....	1.26±0.02	17.2±0.4	18.3±0.5
Benson & Hedges KFHP .....	1.26±0.02	15.4±0.2	12.6±0.3
Pall Mall 100's 100FSP .....	1.28±0.02	17.0±0.3	17.1±0.3
Richland 100's (25) 100FSP .....	1.28±0.02	17.0±0.3	17.3±0.4
Newport 25's KFMSP .....	1.28±0.02	17.2±0.2	18.2±0.4
More 120s 120FMSP .....	1.28±0.03	16.6±0.3	22.0±0.5
Chesterfield RNFSP .....	1.30±0.03	20.0±0.5	13.3±0.4
Max 120s 120FSP .....	1.34±0.03	17.1±0.4	17.7±0.4
Rothmans KFHP .....	1.34±0.02	19.4±0.4	22.5±0.7
Kool RNFMS .....	1.36±0.03	21.5±0.8	14.5±0.2
Max 120s 120FMSP .....	1.38±0.03	17.2±0.4	17.0±0.5
Dunhill International 100FHP .....	1.39±0.03	15.2±0.3	17.6±0.3
Camel RNFSP .....	1.39±0.02	22.0±0.3	14.2±0.4
Raleigh KNFSP .....	1.40±0.03	23.8±0.5	16.6±0.4
Newport 100's 100FMHP .....	1.46±0.02	19.2±0.2	19.4±0.4
Newport 100's 100FMSP .....	1.47±0.03	19.3±0.3	19.4±0.4
Newport 25's 100FMSP .....	1.48±0.02	19.5±0.3	19.8±0.3
Spring 100's 100FMSP .....	1.49±0.03	19.3±0.2	19.0±0.2
Old Gold Filter 100's 100FSP .....	1.50±0.03	19.7±0.3	19.6±0.4
Craven "A" Filter Standard Size RFHP .....	1.51±0.03	18.6±0.4	13.6±0.3
Lucky Strike RNFSP .....	1.52±0.02	24.4±0.5	16.5±0.3
Tall 120s 120FMSP .....	1.57±0.03	18.0±0.3	16.5±0.5
Herbert Tareyton KNFSP .....	1.58±0.03	25.1±0.9	17.8±0.4
Philip Morris Commander KNFSP .....	1.61±0.03	26.3±0.5	16.2±0.5
Pall Mall KNFSP .....	1.64±0.02	24.9±0.3	16.6±0.4
Tall 120s 120FSP .....	1.64±0.03	20.4±0.3	20.2±0.4
Pall Mall 25's KNFSP .....	1.64±0.03	24.7±0.3	16.5±0.3
Chesterfield KNFSP .....	1.65±0.04	24.2±0.5	15.3±0.5

\*Retested brand

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted "Nicotine" Results**

<b>Brand</b>	<b>"Nicotine" mg/cig</b>	<b>"Tar" mg/cig</b>	<b>CO mg/cig</b>
Players RNFHP.....	1.74±0.03	25.2±0.4	15.9±0.4
English Ovals KNFHP .....	1.87±0.04	23.8±0.6	15.6±0.5
Old Gold Straights KNFSP.....	1.89±0.05	26.9±0.6	18.7±0.5

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted Carbon Monoxide Results**

Brand	CO mg/cig	"Tar" mg/cig	"Nicotine" mg/cig
Carlton KFHP .....	<0.5	<0.5	<0.05
Now KFHP .....	<0.5	<0.5	<0.05
Now 100s 100FHP .....	<0.5	<0.5	<0.05
Carlton 100's 100FMHP .....	1.0±0.1	0.6±0.1	0.10±0.01
Carlton 100's 100FHP .....	1.1±0.1	0.7±0.1	0.10±0.01
Carlton KFMSP .....	1.4±0.1	0.6±0.1	0.09±0.01
Now KFSP .....	2.3±0.1	1.0±0.1	0.14±0.01
Now KFMSP .....	2.3±0.1	1.1±0.1	0.13±0.01
Carlton KFSP .....	2.4±0.1	1.3±0.1	0.15±0.01
Kool Ultra KFMSP .....	2.7±0.2	2.2±0.2	0.21±0.02
Now 100s 100FSP .....	3.1±0.2	1.9±0.1	0.21±0.01
Triumph KFSP .....	3.8±0.2	3.1±0.1	0.32±0.02
Now 100s 100FMSP .....	4.3±0.2	2.5±0.1	0.26±0.01
Triumph KFMSP .....	4.3±0.2	3.5±0.2	0.34±0.02
Kent III KFSP .....	4.3±0.2	3.4±0.2	0.35±0.02
Carlton 100's 100FSP .....	4.6±0.2	3.4±0.1	0.35±0.01
Kool Ultra 100's 100FMSP .....	5.2±0.3	5.0±0.3	0.45±0.02
Carlton 120's 120FMSP .....	5.5±0.2	6.2±0.2	0.62±0.03
Merit Ultra Lights KFSP .....	5.5±0.2	4.4±0.2	0.43±0.01
Carlton 120's 120FSP .....	5.6±0.2	6.5±0.2	0.62±0.02
Merit Ultra Lights KFMSP .....	5.9±0.2	4.5±0.1	0.42±0.01
Tareyton Lights KFSP .....	6.0±0.2	5.2±0.2	0.44±0.01
Capri 100FMHP .....	6.0±0.2	8.9±0.2	0.73±0.02
True KFMSP .....	6.1±0.4	4.9±0.3	0.46±0.02
Benson & Hedges Deluxe Ultra Lights 100's 100FHP .....	6.2±0.3	5.0±0.2	0.44±0.02
Benson & Hedges Deluxe Ultra Lights 100's 100FMHP .....	6.2±0.2	5.2±0.1	0.47±0.01
L & M Long Lights 100FSP .....	6.3±0.2	7.8±0.2	0.80±0.02
Capri 100FHP .....	6.4±0.2	9.2±0.2	0.78±0.02
Carlton 100's 100FMSP .....	6.4±0.2	4.5±0.1	0.42±0.01
True KFSP .....	6.4±0.3	5.1±0.2	0.48±0.02
Kent III 100s 100FSP .....	6.6±0.3	4.7±0.2	0.45±0.01
Cambridge Ultra Low Tar 100's 100FSP .....	6.6±0.3	4.7±0.2	0.41±0.01
Kent III 100s 100FHP .....	6.8±0.3	5.0±0.2	0.50±0.03
True 100's 100FMSP .....	7.3±0.5	6.7±0.4	0.61±0.03
Triumph 100s 100FSP .....	7.4±0.4	5.3±0.3	0.50±0.02
Merit Ultra Lights 100's 100FSP .....	7.4±0.2	5.3±0.1	0.50±0.01
True 100's 100FSP .....	7.4±0.4	6.7±0.3	0.61±0.02
Triumph 100s 100FMSP .....	7.5±0.2	5.4±0.2	0.52±0.01
Salem Ultra Lights KFMSP .....	7.7±0.2	4.9±0.1	0.43±0.01
Vantage Ultra Lights KFSP .....	8.0±0.2	5.5±0.1	0.47±0.01
Salem Ultra Lights 100's 100FMSP .....	8.0±0.2	5.1±0.1	0.45±0.01
Merit Ultra Lights 100's 100FMSP .....	8.2±0.3	6.0±0.2	0.53±0.02
Winston Ultra Lights KFSP .....	8.5±0.2	5.5±0.2	0.46±0.01
Tareyton Long Lights 100FSP .....	8.8±0.3	8.1±0.2	0.68±0.01
Winston Ultra Lights 100's 100FSP .....	9.0±0.3	5.3±0.2	0.47±0.02
Kool Lights KFMSP .....	9.0±0.2	8.2±0.2	0.69±0.02
Newport Lights KFMSP .....	9.1±0.3	8.3±0.3	0.75±0.02

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted Carbon Monoxide Results**

<b>Brand</b>	<b>CO mg/cig</b>	<b>"Tar" mg/cig</b>	<b>"Nicotine" mg/cig</b>
Kent Golden Lights KFMSP .....	9.1±0.4	8.3±0.3	0.75±0.02
Belair 100's 100FMSP.....	9.1±0.2	8.8±0.2	0.67±0.02
Virginia Slims Lights 100FMHP .....	9.2±0.2	8.5±0.2	0.69±0.02
Virginia Slims Lights 100FHP .....	9.3±0.3	8.8±0.2	0.70±0.02
Vantage Ultra Lights 100s 100FSP .....	9.5±0.2	5.8±0.1	0.50±0.01
Newport Lights 100's 100FMSP .....	9.5±0.4	9.0±0.3	0.83±0.02
Newport Lights KFMHP.....	9.5±0.3	8.6±0.2	0.73±0.02
Kent Golden Lights KFSP .....	9.6±0.3	8.5±0.2	0.74±0.02
Kent Golden Lights KFHP .....	9.7±0.4	8.8±0.3	0.78±0.02
Merit KFSP.....	9.8±0.3	7.6±0.2	0.59±0.01
Belair KFMSP .....	9.8±0.2	10.7±0.2	0.84±0.01
Merit KFHP.....	9.8±0.2	7.8±0.2	0.60±0.01
Newport Lights 100's 100FMHP .....	9.9±0.3	9.2±0.3	0.84±0.02
Silva Thins 100FSP.....	10.0±0.2	11.7±0.2	0.98±0.02
Lucky Strike Lights 100's 100FSP .....	10.0±0.3	8.9±0.2	0.74±0.01
Merit KFMSP .....	10.0±0.3	7.7±0.2	0.58±0.01
Kent Golden Lights 100s 100FMSP.....	10.0±0.3	9.3±0.2	0.85±0.02
Kool Lights 100's 100FMSP.....	10.0±0.3	8.5±0.2	0.73±0.01
More Lights 100s 100FMHP .....	10.2±0.3	9.0±0.3	0.69±0.03
Lucky Strike Lights KFSP .....	10.2±0.3	8.4±0.3	0.68±0.02
Salem Slim Lights 100's 100FMHP .....	10.2±0.3	9.5±0.2	0.77±0.02
Parliament Lights KFHP .....	10.3±0.4	9.5±0.2	0.72±0.02
Bright 100s 100FMSP .....	10.3±0.3	6.0±0.1	0.44±0.01
Parliament Lights KFSP .....	10.4±0.2	9.1±0.2	0.71±0.02
Marlboro Lights KFMSP .....	10.4±0.3	9.9±0.2	0.77±0.01
Dunhill Int Superior Mild 100FHP.....	10.5±0.2	8.4±0.2	0.73±0.01
Silva Thins Menthol 100FMSP .....	10.5±0.3	12.3±0.3	1.05±0.02
Kent Golden Lights 100s 100FSP .....	10.5±0.4	9.6±0.3	0.86±0.02
Malibu Lights 100's 100FSP .....	10.6±0.4	9.1±0.2	0.75±0.02
L & M 30's Lights 100's 100FSP .....	10.7±0.3	12.6±0.3	1.06±0.02
More Lights 100s 100FHP .....	10.7±0.3	10.0±0.2	0.78±0.02
Pall Mall Red Lights KFSP .....	10.7±0.3	10.3±0.3	0.81±0.02
Malibu Lights KFSP .....	10.8±0.3	10.2±0.2	0.79±0.01
Eve Slim Lights 100's 100FMHP .....	10.8±0.3	12.6±0.3	1.00±0.02
Benson & Hedges Multifilter KFSP .....	10.8±0.2	11.2±0.3	0.85±0.02
Old Gold Lights KFSP .....	10.9±0.3	9.3±0.2	0.81±0.02
Eve Slim Lights 100's 100FHP .....	11.0±0.2	12.8±0.2	1.03±0.02
Falcon Lights 100's 100FMSP .....	11.0±0.3	8.9±0.2	0.73±0.02
Players Lights 25's KFMSP .....	11.1±0.4	10.0±0.2	0.71±0.01
Players Lights 25's KFSP .....	11.1±0.2	10.0±0.2	0.72±0.02
Salem Lights 100's 100FMSP .....	11.1±0.4	9.3±0.3	0.74±0.02
Falcon Lights KFSP .....	11.2±0.3	11.2±0.2	0.77±0.02
Kent Golden Lights 100s 100FHP .....	11.2±0.4	10.2±0.2	0.91±0.02
Marlboro Lights 100's 100FHMP .....	11.2±0.4	10.2±0.2	0.81±0.02
Marlboro Lights KFMHP .....	11.2±0.3	10.2±0.2	0.78±0.02
Kool Milds KFMHP .....	11.3±0.3	11.6±0.3	0.88±0.02
Camel Lights KFSP .....	11.3±0.3	8.8±0.2	0.65±0.01

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted Carbon Monoxide Results**

Brand	CO mg/cig	"Tar" mg/cig	"Nicotine" mg/cig
Newport Stripes Slim Lights 100FMHP.....	11.4±0.2	9.3±0.2	0.76±0.02
Ritz 100 100FHP .....	11.5±0.4	10.4±0.3	0.78±0.02
Ritz 100 100FMHP .....	11.5±0.3	11.1±0.3	0.81±0.02
Eve Lights 120's 120FHP .....	11.6±0.5	13.0±0.4	1.12±0.03
Salem Lights 100's 100FMHP .....	11.6±0.2	11.3±0.2	0.86±0.02
Silva Thins Menthol 100FMHP.....	11.7±0.3	11.1±0.2	0.90±0.01
Winston Lights KFHP .....	11.7±0.3	9.7±0.2	0.63±0.01
Doral Ultra Lights 100's 100FSP .....	11.7±0.5	6.7±0.3	0.48±0.02
Camel Lights KFHP .....	11.8±0.3	9.9±0.2	0.64±0.01
Winston Lights 100's 100FHP .....	11.8±0.3	9.9±0.2	0.72±0.02
Merit 100's 100FSP .....	11.8±0.3	10.0±0.2	0.80±0.02
Century 25's Lights (25) KFSP .....	11.8±0.3	9.7±0.2	0.70±0.02
Falcon Lights KFMSP .....	11.9±0.4	10.2±0.3	0.78±0.02
Benson & Hedges Lights 100's 100FMSP .....	12.0±0.2	10.7±0.2	0.81±0.02
Marlboro Lights 100's 100FMSP .....	12.0±0.3	10.9±0.1	0.86±0.01
Merit 100's 100FMSP .....	12.0±0.3	10.1±0.2	0.78±0.02
Eve Lights 120's 120FMHP .....	12.0±0.3	13.5±0.2	1.17±0.02
Pall Mall Lights 100's 100FSP .....	12.0±0.3	10.3±0.2	0.84±0.02
Cambridge Lights KFMSP.....	12.1±0.3	11.9±0.2	0.84±0.02
Marlboro Lights KFSP .....	12.2±0.3	11.2±0.2	0.83±0.02
Players KFHP .....	12.2±0.2	11.7±0.2	0.83±0.02
Pall Mall Red Lights 100's 100FSP.....	12.2±0.4	11.1±0.2	0.88±0.02
Marlboro Lights 100's 100FHP .....	12.3±0.3	10.8±0.2	0.85±0.02
Lucky Strike Menthol 100's 100FMSP .....	12.3±0.2	11.8±0.1	0.96±0.02
Players KFMHP .....	12.3±0.2	11.9±0.2	0.82±0.01
Marlboro Lights 25's KFSP .....	12.4±0.3	11.2±0.2	0.80±0.02
Marlboro Lights KFHP .....	12.4±0.3	11.0±0.2	0.82±0.02
Dunhill Menthol Mild 100FMHP .....	12.5±0.2	10.4±0.2	0.96±0.02
Malibu Menthol 100's 100FMSP .....	12.5±0.3	11.6±0.2	0.94±0.02
Vantage KFMSP .....	12.5±0.3	10.0±0.2	0.69±0.01
Vantage 100s 100FSP .....	12.5±0.3	8.8±0.2	0.63±0.02
Silva Thins Filters 100FHP .....	12.5±0.3	12.2±0.2	0.97±0.02
Benson & Hedges KFHP .....	12.6±0.3	15.4±0.2	1.26±0.02
Pall Mall Red Filters KFSP .....	12.6±0.3	13.6±0.3	1.02±0.02
Lucky Strike KFSP .....	12.6±0.3	11.8±0.3	0.89±0.02
Salem Lights KFMSP .....	12.6±0.2	9.8±0.2	0.72±0.02
Kool Milds 100's 100FMSP .....	12.6±0.4	12.0±0.3	0.95±0.02
Cambridge Lights KFSP .....	12.7±0.3	12.3±0.2	0.85±0.01
Lucky Strike Filters 100's 100FSP .....	12.7±0.2	11.9±0.2	0.96±0.02
Parliament Lights 100's 100FSP .....	12.7±0.2	12.0±0.2	0.95±0.02
Vantage Menthol 100s 100FMSP .....	12.7±0.3	8.3±0.2	0.61±0.01
Players 100's 100FMHP .....	12.7±0.3	14.0±0.2	0.98±0.02
Richland Lights (25) KFSP .....	12.7±0.3	11.5±0.2	0.89±0.02
Lucky Strike KFHP.....	12.8±0.4	12.1±0.2	0.92±0.02
American Lights KFSP.....	12.9±0.3	11.9±0.2	0.91±0.02
L & M KFSP.....	12.9±0.3	13.7±0.2	1.08±0.02
Doral Lights 100's 100FSP .....	12.9±0.3	11.3±0.3	0.70±0.02

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted Carbon Monoxide Results**

Brand	CO mg/cig	“Tar” mg/cig	“Nicotine” mg/cig
Players 100's 100FHP .....	12.9±0.3	13.9±0.2	0.98±0.02
Kent KFHP .....	12.9±0.3	11.3±0.2	0.86±0.02
Benson & Hedges Lights 100's 100FSP .....	13.0±0.3	10.7±0.2	0.83±0.02
Marlboro Lights 100's 100FSP .....	13.0±0.4	11.0±0.2	0.85±0.02
Raleigh Lights KFSP .....	13.1±0.3	11.4±0.2	0.87±0.02
Kool Milds KFMSP .....	13.1±0.3	12.3±0.3	0.93±0.02
Satin 100FSP .....	13.1±0.4	11.4±0.3	0.97±0.02
Viceroy Lights KFSP .....	13.1±0.3	11.3±0.3	0.88±0.02
Pall Mall Light 100's Low Tar 100FMSP .....	13.1±0.3	13.3±0.2	1.08±0.02
Century 25's Menthol Lights 100's 100FMSP .....	13.2±0.3	11.5±0.2	0.84±0.01
Winston Lights KFSP .....	13.2±0.3	10.7±0.2	0.75±0.01
Lark KFSP .....	13.3±0.3	14.3±0.3	1.11±0.03
Lark Lights KFSP .....	13.3±0.3	13.4±0.3	1.03±0.02
Chesterfield RNFSP .....	13.3±0.4	20.0±0.5	1.30±0.03
Satin 100FMSP .....	13.3±0.4	11.4±0.3	0.97±0.02
Century 25's Lights 100's 100FSP .....	13.4±0.3	11.9±0.3	0.89±0.02
Malibu 100's 100FSP .....	13.4±0.3	13.9±0.3	1.10±0.02
Winston Lights 100's 100FSP .....	13.4±0.3	11.4±0.2	0.81±0.01
Vantage KFSP .....	13.5±0.3	10.5±0.2	0.75±0.02
Richland 20's Lights KFSP .....	13.5±0.3	11.7±0.3	0.90±0.02
Malibu Filters KFSP .....	13.6±0.3	16.4±0.3	1.18±0.03
Craven "A" Filter Standard Size RFHP .....	13.6±0.3	18.6±0.4	1.51±0.03
Doral Menthol Lights 100's 100FMSP .....	13.7±0.3	12.1±0.3	0.73±0.01
Players 25's Lights 100's 100FMSP .....	13.7±0.3	11.4±0.2	0.81±0.01
Magna Lites KFSP .....	13.7±0.2	9.1±0.2	0.64±0.01
Virginia Slims 100FSP .....	13.8±0.3	15.3±0.2	1.07±0.02
American Lights 100's 100FSP .....	13.9±0.2	13.3±0.2	1.08±0.01
Virginia Slims 100FMSP .....	13.9±0.3	15.1±0.3	1.06±0.03
Kent KFSP .....	13.9±0.3	12.0±0.2	0.88±0.02
Lark 100FSP .....	14.0±0.2	14.7±0.2	1.22±0.02
Pall Mall Red Filters 100's 100FSP .....	14.0±0.2	13.8±0.3	1.07±0.02
Richland Lights (25) 100's 100FSP .....	14.0±0.2	12.4±0.2	0.94±0.02
Doral Menthol Lights KFMSP .....	14.0±0.2	11.7±0.2	0.64±0.01
Viceroy Lights 100's 100FSP .....	14.1±0.3	11.9±0.2	0.92±0.02
Players 25's Lights 100's 100FSP .....	14.1±0.4	11.9±0.3	0.86±0.02
L & M Super 100 100FSP .....	14.2±0.3	13.9±0.2	1.12±0.02
Camel RNFSP .....	14.2±0.4	22.0±0.3	1.39±0.02
Richland 20's Lights 100's 100FSP .....	14.2±0.4	12.1±0.2	0.90±0.02
Raleigh Lights 100's 100FSP .....	14.3±0.3	12.2±0.3	0.94±0.02
Kent 100s 100FMSP .....	14.4±0.3	14.0±0.2	1.04±0.01
Kool RNFMSp .....	14.5±0.2	21.5±0.8	1.36±0.03
Cambridge Lights 100's 100FSP .....	14.5±0.4	12.0±0.2	0.87±0.02
Doral Lights KFSP .....	14.5±0.4	12.1±0.3	0.67±0.02
Lark Light 100's 100FSP .....	14.5±0.5	13.9±0.3	1.15±0.03
Viceroy KFSP .....	14.5±0.3	15.3±0.3	0.97±0.02
Cambridge Lights 100's 100FMSP .....	14.6±0.4	11.9±0.2	0.86±0.01
Kent 100s 100FSP .....	14.7±0.4	13.6±0.3	1.02±0.02

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**  
**Sorted Carbon Monoxide Results**

Brand	CO mg/cig	"Tar" mg/cig	"Nicotine" mg/cig
Raleigh KFSP .....	14.7±0.3	15.5±0.4	0.97±0.03
Saratoga 120's 120FHP.....	14.8±0.3	14.7±0.2	1.07±0.02
Falcon Lights 100's 100FSP .....	14.8±0.4	12.1±0.2	0.85±0.02
Saratoga 120's 120FMHP.....	14.8±0.4	14.7±0.3	1.07±0.02
Malibu Menthol KFMSP .....	14.8±0.2	17.2±0.2	1.24±0.02
Magna KFSP.....	14.9±0.2	13.9±0.2	0.91±0.02
*Virginia Slims Lights 120's 120FMHP .....	14.9±0.2	14.9±0.2	1.08±0.01
Camel Lights 100's 100FSP.....	15.0±0.3	11.4±0.2	0.81±0.01
Viceroy Super Long 100's 100FSP .....	15.1±0.3	15.9±0.3	1.14±0.02
*Virginia Slims Lights 120's 120FHP .....	15.2±0.3	14.8±0.2	1.09±0.02
Marlboro KFHP.....	15.2±0.3	17.0±0.2	1.14±0.02
Chesterfield KNFSP .....	15.3±0.5	24.2±0.5	1.65±0.04
*Marlboro KFMSP .....	15.3±0.2	17.1±0.3	1.18±0.01
Camel Filters KFSP .....	15.4±0.2	15.6±0.3	1.01±0.02
Rothmans Special Mild KFHP.....	15.5±0.4	13.6±0.2	1.03±0.02
St. Moritz Filter 100s 100FSP.....	15.5±0.2	14.9±0.2	1.08±0.02
Philip Morris International 100FHP .....	15.6±0.4	16.8±0.4	1.15±0.02
English Ovals KNFHP .....	15.6±0.5	23.8±0.6	1.87±0.04
Richland (25) KFMSP .....	15.6±0.3	16.2±0.3	1.09±0.02
Richland (25) KFSP .....	15.8±0.2	16.6±0.2	1.18±0.02
Marlboro 25's KFSP .....	15.9±0.3	17.2±0.3	1.13±0.02
Players RNFHP .....	15.9±0.4	25.2±0.4	1.74±0.03
Tareyton KFSP .....	15.9±0.3	14.3±0.3	0.98±0.02
Cambridge Full Flavor 100's 100FSP .....	16.0±0.3	17.2±0.3	1.17±0.02
Raleigh 100's 100FSP .....	16.0±0.3	15.5±0.3	0.99±0.02
Richland 20's KFSP .....	16.0±0.3	16.3±0.3	1.13±0.02
Cambridge Full Flavor KFSP .....	16.1±0.3	17.1±0.3	1.09±0.01
Salem 100's 100FMSP .....	16.1±0.3	16.8±0.3	1.19±0.02
Richland 20's KFMSP .....	16.1±0.3	16.4±0.4	1.05±0.02
Philip Morris Commander KNFSP .....	16.2±0.5	26.3±0.5	1.61±0.03
Philip Morris International 100FMHP .....	16.2±0.4	16.9±0.2	1.08±0.02
Craven "A" KFHP .....	16.3±0.4	15.8±0.4	1.15±0.02
Winston KFSP .....	16.3±0.2	17.1±0.3	1.13±0.02
Harley Davidson KFSP .....	16.3±0.4	14.1±0.3	0.98±0.02
Magna KFHP .....	16.3±0.4	14.1±0.3	0.90±0.01
Richland 100's (25) 100FMSP .....	16.3±0.4	16.0±0.3	1.16±0.02
Marlboro 100's Red 100FHP.....	16.3±0.4	16.4±0.3	1.19±0.02
*Benson & Hedges 100's 100FMSP .....	16.4±0.3	17.1±0.2	1.20±0.02
Kool KFMHP .....	16.4±0.4	16.2±0.4	1.12±0.03
*Benson & Hedges 100's 100FSP .....	16.4±0.4	17.3±0.2	1.22±0.02
Newport Stripes 100FMHP .....	16.5±0.2	12.2±0.2	0.91±0.02
*Alpine KFMSP .....	16.5±0.2	17.1±0.2	1.14±0.02
Newport KFMHP .....	16.5±0.3	15.7±0.2	1.17±0.02
Marlboro 100's 100FSP .....	16.5±0.4	17.1±0.3	1.22±0.02
Tall 120s 120FMSP .....	16.5±0.5	18.0±0.3	1.57±0.03

\*Retested brand

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**Market Sample 31**  
**Sorted Carbon Monoxide Results**

Brand	CO mg/cig	"Tar" mg/cig	"Nicotine" mg/cig
Lucky Strike RNFSP.....	16.5±0.3	24.4±0.5	1.52±0.02
Pall Mall 25's KNFSP.....	16.5±0.3	24.7±0.3	1.64±0.03
Newport Stripes 100FHP.....	16.6±0.4	12.3±0.3	0.94±0.02
Pall Mall KNFSP.....	16.6±0.4	24.9±0.3	1.64±0.02
Camel Filters KFHP.....	16.6±0.3	16.8±0.2	1.06±0.02
Raleigh KNFSP.....	16.6±0.4	23.8±0.5	1.40±0.03
Salem KFMSP.....	16.7±0.3	15.9±0.3	1.04±0.02
Kool KFMSP.....	16.8±0.3	16.8±0.3	1.14±0.02
Tareyton 100's 100FSP.....	16.8±0.4	14.1±0.2	1.02±0.02
Marlboro 100's 100FHP.....	16.9±0.6	17.0±0.4	1.22±0.03
Winston KFHP.....	16.9±0.3	16.8±0.3	1.06±0.02
Marlboro KFSP.....	16.9±0.4	17.4±0.2	1.17±0.02
Old Gold Lights 100s 100FSP.....	17.0±0.3	12.3±0.2	0.91±0.02
Kool Super Longs 100's 100FMSP.....	17.0±0.3	16.7±0.3	1.25±0.02
Marlboro 100's Red 100FSP.....	17.0±0.2	16.5±0.2	1.19±0.02
*Benson & Hedges 100's 100FHP.....	17.0±0.4	17.3±0.2	1.20±0.03
Dunhill Menthol 100FMHP.....	17.0±0.4	14.2±0.3	1.19±0.02
Max 120s 120FMSP.....	17.0±0.5	17.2±0.4	1.38±0.03
Richland 20's Menthol 100's 100FMSP.....	17.1±0.3	16.7±0.3	1.15±0.02
Pall Mall 100's 100FSP.....	17.1±0.3	17.0±0.3	1.28±0.02
St. Moritz Menthol 100FMSP.....	17.1±0.4	14.9±0.3	0.96±0.01
*Benson & Hedges 100's 100FMHP.....	17.2±0.3	17.4±0.2	1.22±0.01
Doral Full Flavor 100's 100FSP.....	17.2±0.3	14.8±0.2	0.84±0.01
Richland 100's (25) 100FSP.....	17.3±0.4	17.0±0.3	1.28±0.02
Richland 20's 100's 100FSP.....	17.3±0.4	16.6±0.3	1.23±0.02
Dunhill International 100FHP.....	17.6±0.3	15.2±0.3	1.39±0.03
Max 120s 120FSP.....	17.7±0.4	17.1±0.4	1.34±0.03
Herbert Tareyton KNFSP.....	17.8±0.4	25.1±0.9	1.58±0.03
Century 25's (25) KFSP.....	17.8±0.3	15.3±0.3	0.99±0.02
Old Gold Filters KFSP.....	18.1±0.3	16.8±0.2	1.24±0.02
Newport 25's KFMSP.....	18.2±0.4	17.2±0.2	1.28±0.02
Newport KFMSP.....	18.3±0.5	17.2±0.4	1.26±0.02
Winston 100's 100FSP.....	18.6±0.3	16.9±0.2	1.06±0.02
Camel Filters 100's 100FSP.....	18.7±0.3	17.5±0.2	1.06±0.01
Old Gold Straights KNFSP.....	18.7±0.5	26.9±0.6	1.89±0.05
Spring 100's 100FMSP.....	19.0±0.2	19.3±0.2	1.49±0.03
Newport 100's 100FMHP.....	19.4±0.4	19.2±0.2	1.46±0.02
Newport 100's 100FMSP.....	19.4±0.4	19.3±0.3	1.47±0.03
More Lights 120s 120FMSP.....	19.6±0.5	12.2±0.4	0.99±0.03
Doral Full Flavor KFSP.....	19.6±0.4	17.4±0.2	0.92±0.01
Old Gold Filter 100's 100FSP.....	19.6±0.4	19.7±0.3	1.50±0.03
Newport 25's 100FMSP.....	19.8±0.3	19.5±0.3	1.48±0.02
More Lights 120s 120FSP.....	20.2±0.5	12.9±0.2	0.98±0.01
Tall 120s 120FSP.....	20.2±0.4	20.4±0.3	1.64±0.03
Century 25's 100's 100FSP.....	20.9±0.5	17.5±0.3	1.13±0.02

\*Retested brand

**Tobacco Institute Testing Laboratory  
Market Sample 31  
Sorted Carbon Monoxide Results**

<b>Brand</b>	<b>CO mg/cig</b>	<b>"Tar" mg/cig</b>	<b>"Nicotine" mg/cig</b>
More 120s 120FSP .....	21.5±0.4	16.5±0.4	1.19±0.02
More 120s 120FMSP .....	22.0±0.5	16.6±0.3	1.28±0.03
Rothmans KFHP .....	22.5±0.7	19.4±0.4	1.34±0.02

## **Appendix C -- Butt Lengths**

**PM3001059872**

Source: <https://www.industrydocuments.ucsf.edu/docs/nkkk0001>

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**

**Butt Lengths**

<b>Brand</b>	<b>Length - mm</b>
Alpine KFMSP .....	27,28,29
American Lights KFSPS .....	32,33,34
American Lights 100's 100FSP .....	34,35
Belair KFMSP .....	35,36
Belair 100's 100FMSP .....	38,39,40
Benson & Hedges KFHP .....	33,34
Benson & Hedges 100's 100FHP .....	35,36
Benson & Hedges 100's 100FMHP .....	35,36
Benson & Hedges 100's 100FSP .....	34,35,36
Benson & Hedges 100's 100FMSP .....	34,35,36
Benson & Hedges Deluxe Ultra Lights 100's 100FHP .....	38,39,40
Benson & Hedges Deluxe Ultra Lights 100's 100FMHP .....	39,40
Benson & Hedges Lights 100's 100FSP .....	38,39,40
Benson & Hedges Lights 100's 100FMSP .....	38,39,40
Benson & Hedges Multifilter KFSP .....	32,33,34
Bright 100s 100FMSP .....	38
Cambridge Full Flavor KFSP .....	28
Cambridge Full Flavor 100's 100FSP .....	38,39,40
Cambridge Lights KFSP .....	33,34
Cambridge Lights KFMSP .....	33,34
Cambridge Lights 100's 100FSP .....	38,39,40
Cambridge Lights 100's 100FMSP .....	38,39,40
Cambridge Ultra Low Tar 100's 100FSP .....	38,39,40
Camel RNFSP .....	23
Camel Filters KFHP .....	25,26
Camel Filters KFSP .....	28,29
Camel Filters 100's 100FSP .....	34,35,36
Camel Lights KFHP .....	29,30,31
Camel Lights KFSP .....	33,34,35
Camel Lights 100's 100FSP .....	37,38
Capri 100FHP .....	35,36
Capri 100FMHP .....	35,36
Carlton KFHP .....	37,38,39,40,41
Carlton KFSP .....	32,33,33.5,34
Carlton KFMSP .....	32,33,34
Carlton 100's 100FHP .....	37,38,39
Carlton 100's 100FMHP .....	37,38,39
Carlton 100's 100FSP .....	34,35,36
Carlton 100's 100FMSP .....	34,35,36
Carlton 120's 120FSP .....	37,37.5,38,38.5,39
Carlton 120's 120FMSP .....	37,38,39
Century 25's (25) KFSP .....	29,30
Century 25's 100's 100FSP .....	37,38,39
Century 25's Lights (25) KFSP .....	33,34
Century 25's Lgts 100's 100FSP .....	37,38,39
Century 25's Menthol Lights 100's .....	38,39
Chesterfield RNFSP .....	23

# Tobacco Institute Testing Laboratory Market Sample 31

## Butt Lengths

Brand	Length - mm
Chesterfield KNFSP .....	23
Doral Full Flavor KFSP .....	27,27.5,28
Doral Full Flavor 100's 100FSP .....	38,39
Doral Lights KFSP .....	33,33.5,34,34.5,35
Doral Menthol Lights KFMSP .....	34,34.5,35
Doral Lights 100's 100FSP .....	37,38,39
Doral Menthol Lights 100's 100FMSP .....	36,37,37.5,38,38.5,39,40
Doral Ultra Lights 100's 100FSP .....	37,38
English Ovals KNFHP .....	23
Eve Slim Lights 100's 100FHP .....	37,38,39
Eve Slim Lights 100's 100FMHP .....	37,38,39
Eve Lights 120's 120FHP .....	37,38,38.5,39
Eve Lights 120's 120FMHP .....	37,38,39
Falcon Lights KFSP .....	34,34.5,35,36
Falcon Lights KFMSP .....	34,34.5,35,36
Falcon Lights 100's 100FSP .....	38,39,40
Falcon Lights 100's 100FMSP .....	38,39
Harley Davidson KFSP .....	28,28.5,29
Herbert Tareyton KNFSP .....	23
Kent Golden Lights KFHP .....	32,32.5,33,33.5,34
Kent Golden Lights KFSP .....	34,34.5,35,35.5,36
Kent Golden Lights KFMSP .....	34,35,36
Kent Golden Lights 100s 100FHP .....	35,36,37
Kent Golden Lights 100s 100FSP .....	36,37,38
Kent Golden Lights 100s 100FMSP .....	34,35,36,37,38
Kent KFHP .....	27,28,29
Kent KFSP .....	28,28.5,29,30
Kent 100s 100FSP .....	36,37
Kent 100s 100FMSP .....	36,37,38
Kent III KFSP .....	34,35
Kent III 100s 100FHP .....	36,37,38,39
Kent III 100s 100FSP .....	35,36,37,37.5,38
Kool RNFMS .....	23
Kool KFMHP .....	26,27
Kool KFMSP .....	29,30
Kool Super Longs 100's 100FMSP .....	35,36
Kool Lights KFMSP .....	33,34,35
Kool Lights 100's 100FMSP .....	38,39
Kool Milds KFMHP .....	28,29,30
Kool Milds KFMSP .....	34,35
Kool Milds 100's 100FMSP .....	39,40
Kool Ultra KFMSP .....	34,35
Kool Ultra 100's 100FMSP .....	39,40
L & M KFSP .....	33,33.5,34
L & M Super 100 100FSP .....	37,38
L & M Long Lights 100FSP .....	36,37,38,39,40
L & M 30's Lights 100's 100FSP .....	36,37,38,39,40

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**

**Butt Lengths**

<b>Brand</b>	<b>Length - mm</b>
Lark KFSP .....	32,33,33.5,34
Lark 100FSP .....	39,40
Lark Lights KFSP .....	32,33,34
Lark Light 100's 100FSP .....	37,38,39
Lucky Strike RNFSP .....	23
Lucky Strike KFHP .....	31,32,33,34,35
Lucky Strike KFSP .....	32,33,34
Lucky Strike Filters 100's 100FSP .....	34,35,36
Lucky Strike Menthol 100's 100FMSP .....	34,35,36
Lucky Strike Lights KFSP .....	32,33,33.5,34
Lucky Strike Lights 100's 100FSP .....	34,35,36
Magna KFHP .....	26,26.5
Magna KFSP .....	27,28,29
Magna Lites KFSP .....	33,34,35,36
Malibu Filters KFSP .....	26.5,27
Malibu Menthol KFMSP .....	26,26.5,27
Malibu 100's 100FSP .....	34,35,35.5,36,38
Malibu Menthol 100's 100FMSP .....	35,36
Malibu Lights KFSP .....	33
Malibu Lights 100's 100FSP .....	33,34,35,37
Marlboro KFHP .....	26,27
Marlboro KFSP .....	28,29
Marlboro KFMSP .....	27,28,29
Marlboro 100's 100FHP .....	34,35
Marlboro 100's 100FSP .....	34,35
Marlboro 25's KFSP .....	27,27.5,28,28.5,29
Marlboro Lights KFHP .....	33.5,34,34.5
Marlboro Lights KFMHP .....	33,34,35
Marlboro Lights KFSP .....	33,34,35
Marlboro Lights KFMSP .....	33,34,35
Marlboro Lights 100's 100FHP .....	38,39,40
Marlboro Lights 100's 100FHMP .....	38,39,40
Marlboro Lights 100's 100FSP .....	38,39,40
Marlboro Lights 100's 100FMSP .....	38,39,40
Marlboro Lights 25's KFSP .....	33,34,35
Marlboro 100's Red 100FHP .....	34,35
Marlboro 100's Red 100FSP .....	34,35,36
Max 120s 120FSP .....	37,38,39
Max 120s 120FMSP .....	37,38,39,40
Merit KFHP .....	34,35,35.5,36
Merit KFSP .....	34,34.5,35,35.5,36
Merit KFMSP .....	35,36
Merit 100's 100FSP .....	35,36
Merit 100's 100FMSP .....	38,39,40,41
Merit Ultra Lights KFSP .....	34,35,35.5,36,36.5
Merit Ultra Lights KFMSP .....	34,35,36
Merit Ultra Lights 100's 100FSP .....	38,38.5,39,39.5

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**

**Butt Lengths**

<b>Brand</b>	<b>Length - mm</b>
Merit Ultra Lights 100's 100FMSP .....	39,40
More 120s 120FSP .....	41,41.5,42
More 120s 120FMSP .....	42,43
More Lights 100s 100FHP .....	37,37.5,38
More Lights 100s 100FMHP .....	37,38
More Lights 120s 120FSP .....	42,43
More Lights 120s 120FMSP .....	42,43
Newport KFMHP .....	27,28,29,30
Newport KFMSP .....	28,29
Newport 100's 100FMHP .....	37,38
Newport 100's 100FMSP .....	36,37
Newport 25's KFMSP .....	28,29,30
Newport 25's 100FMSP .....	36,37
Newport Lights KFMHP .....	32,33
Newport Lights KFMSP .....	34,35,36
Newport Lights 100's 100FMHP .....	35,36,37
Newport Lights 100's 100FMSP .....	35,36,37,38,39
Newport Stripes 100FHP .....	35,36,36.5,37
Newport Stripes 100FMHP .....	35,36,36.5,37,38
Newport Stripes Slim Lights 100FMHP .....	37,38,39
Now KFHP .....	34,35
Now KFSP .....	33,34,34.5,35
Now KFMSP .....	33,34,34.5,35
Now 100s 100FHP .....	38,39
Now 100s 100FSP .....	37,38,39
Now 100s 100FMSP .....	37,37.5,38,39
Old Gold Straights KNFSP .....	23
Old Gold Filters KFSP .....	28,29,30
Old Gold Filter 100's 100FSP .....	34,35,36,36.5,37,37.5
Old Gold Lights KFSP .....	34,35,36
Old Gold Lights 100s 100FSP .....	35,36,36.5,37
Pall Mall KNFSP .....	23
Pall Mall 25's KNFSP .....	23
Pall Mall 100's 100FSP .....	34,35,35.5,36
Pall Mall Lights 100's 100FSP .....	36,37,38,39
Pall Mall Light 100's Low Tar 100FMSP .....	34,35,36
Pall Mall Red Filters KFSP .....	24,26,26.5,27,27.5,28,28.5
Pall Mall Red Filters 100's 100FSP .....	35,36
Pall Mall Red Lights KFSP .....	32,32.5,33,33.5
Pall Mall Red Lights 100's 100FSP .....	35,36
Parliament Lights KFHP .....	32.5,33
Parliament Lights KFSP .....	32.5,33,33.5,34
Parliament Lights 100's 100FSP .....	38,38.5,39
Philip Morris Commander KNFSP .....	23
Philip Morris International 100FHP .....	34.5,35,35.5
Philip Morris International 100FMHP .....	34,35
Players RNFHP .....	23

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**

**Butt Lengths**

<b>Brand</b>	<b>Length - mm</b>
Players KFHP .....	34,35,36
Players KFMHP .....	34,35,36
Players 100's 100FHP .....	38,38.5,39
Players 100's 100FMHP .....	38,39,40
Players Lights 25's KFSP .....	33,33.5,34,34.5,
Players Lights 25's KFMSP .....	33.5,34,34.5
Players 25's Lights 100's 100FSP .....	38,38.5,39,39.5
Players 25's Lights 100's 100FMSP .....	38.5,39,40
Raleigh KNFSP .....	23
Raleigh KFSP .....	29,30
Raleigh 100's 100FSP .....	35,36
Raleigh Lights KFSP .....	33,34,35,36
Raleigh Lights 100's 100FSP .....	39,40
Richland 20's KFSP .....	29,30
Richland 20's KFMSP .....	29,30
Richland 20's 100's 100FSP .....	35,36
Richland 20's Menthol 100's 100FMSP .....	35,36
Richland 20's Lights KFSP .....	35,36
Richland 20's Lights 100's 100FSP .....	39,40
Richland (25) KFSP .....	29,30
Richland (25) KFMSP .....	29,30
Richland 100's (25) 100FSP .....	34,34.5,35
Richland 100's (25) 100FMSP .....	35,36
Richland Lights (25) KFSP .....	35,36
Richland Lights (25) 100's 100FSP .....	39,40
Ritz 100 100FHP .....	37.5,38,38.5,39
Ritz 100 100FMHP .....	37,38,39
Salem KFMSP .....	27.5,28
Salem 100's 100FMSP .....	34,35
Salem Lights KFMSP .....	33,34,35
Salem Lights 100's 100FMHP .....	37,38,39,39.5,40
Salem Lights 100's 100FMSP .....	37,37.5,38
Salem Slim Lights 100's 100FMHP .....	36,37,37.5,38,39
Salem Ultra Lights KFMSP .....	33.5,34,34.5
Salem Ultra Lights 100's 100FMSP .....	37,37.5,38,38.5
Saratoga 120's 120FHP .....	38,39,39.5
Saratoga 120's 120FMHP .....	37,39
Satin 100FSP .....	34,35,36,37
Satin 100FMSP .....	34,35,36,37
Silva Thins Filters 100FHP .....	38,39,39.5
Silva Thins Menthol 100FMHP .....	37,38,39,40
Silva Thins 100FSP .....	34,35,35.5,36
Silva Thins Menthol 100FMSP .....	34,35,36,37,
Spring 100's 100FMSP .....	35,36,37
Tall 120s 120FSP .....	37,37.5,38,38.5,39
Tall 120s 120FMSP .....	37,37.5,38,38.5,39
Tareyton KFSP .....	26,26.5,27,28

**Tobacco Institute Testing Laboratory**  
**Market Sample 31**

**Butt Lengths**

<b>Brand</b>	<b>Length - mm</b>
Tareyton 100's 100FSP .....	33,34,34.5,35,35.5,36,37
Tareyton Lights KFSP .....	34,34.5,35,35.5,36
Tareyton Long Lights 100FSP .....	34,34.5,35,35.5,36,37
Triumph KFSP .....	34,34.5,35,35.5,36
Triumph KFMSP .....	34,35,36
Triumph 100s 100FSP .....	36,36.5,37,38,38.5
Triumph 100s 100FMSP .....	35,36,36.5,37,38,38.5
True KFSP .....	32,32.5,33,34
True KFMSP .....	32,32.5,33,34.5,35
True 100's 100FSP .....	36,36.5,37
True 100's 100FMSP .....	35,35.5,36,36.5,37,37.5
Vantage KFSP .....	32,32.5,33,34
Vantage KFMSP .....	32.5,33
Vantage 100s 100FSP .....	35.5,36,37,37.5,38
Vantage Menthol 100s 100FMSP .....	37,37.5,38,38.5
Vantage Ultra Lights KFSP .....	34,34.5
Vantage Ultra Lights 100s 100FSP .....	37,37.5,38,38.5
Viceroy KFSP .....	29,30
Viceroy Super Long 100's 100FSP .....	35,36
Viceroy Lights KFSP .....	33,34,35,36
Viceroy Lights 100's 100FSP .....	39,40
Virginia Slims 100FSP .....	34,34.5,35
Virginia Slims 100FMSP .....	34.5,35
Virginia Slims Lights 100FHP .....	39,39.5,40
Virginia Slims Lights 100FMHP .....	38,38.5,39,39.5
Virginia Slims Lights 120's 120FHP .....	38,39,40
Virginia Slims Lights 120's 120FMHP .....	38,39,40
Winston KFHP .....	25,26
Winston KFSP .....	27,28,29
Winston 100's 100FSP .....	34,34.5,35,35.5
Winston Lights KFHP .....	29.5,30,30.5,31
Winston Lights KFSP .....	33,33.5,34,34.5,35
Winston Lights 100's 100FHP .....	37.5,38
Winston Lights 100's 100FSP .....	37.5,38,38.5
Winston Ultra Lights KFSP .....	33.5,34,35
Winston Ultra Lights 100's 100FSP .....	37.5,38,38.5
Craven "A" KFHP .....	24
Craven "A" Filter Standard Size RFHP .....	23
Dunhill International 100FHP .....	30.5,31
Dunhill Menthol 100FMHP .....	30.5,31
Dunhill Menthol Mild 100FMHP .....	31,32
Dunhill International Superior Mild 100FHP .....	30.5,31
Rothmans KFHP .....	23.5,24
Rothmans Special Mild KFHP .....	26.5,27
St. Moritz Filter 100s 100FSP .....	35,35.5,36
St. Moritz Menthol 100FMSP .....	35,35.5